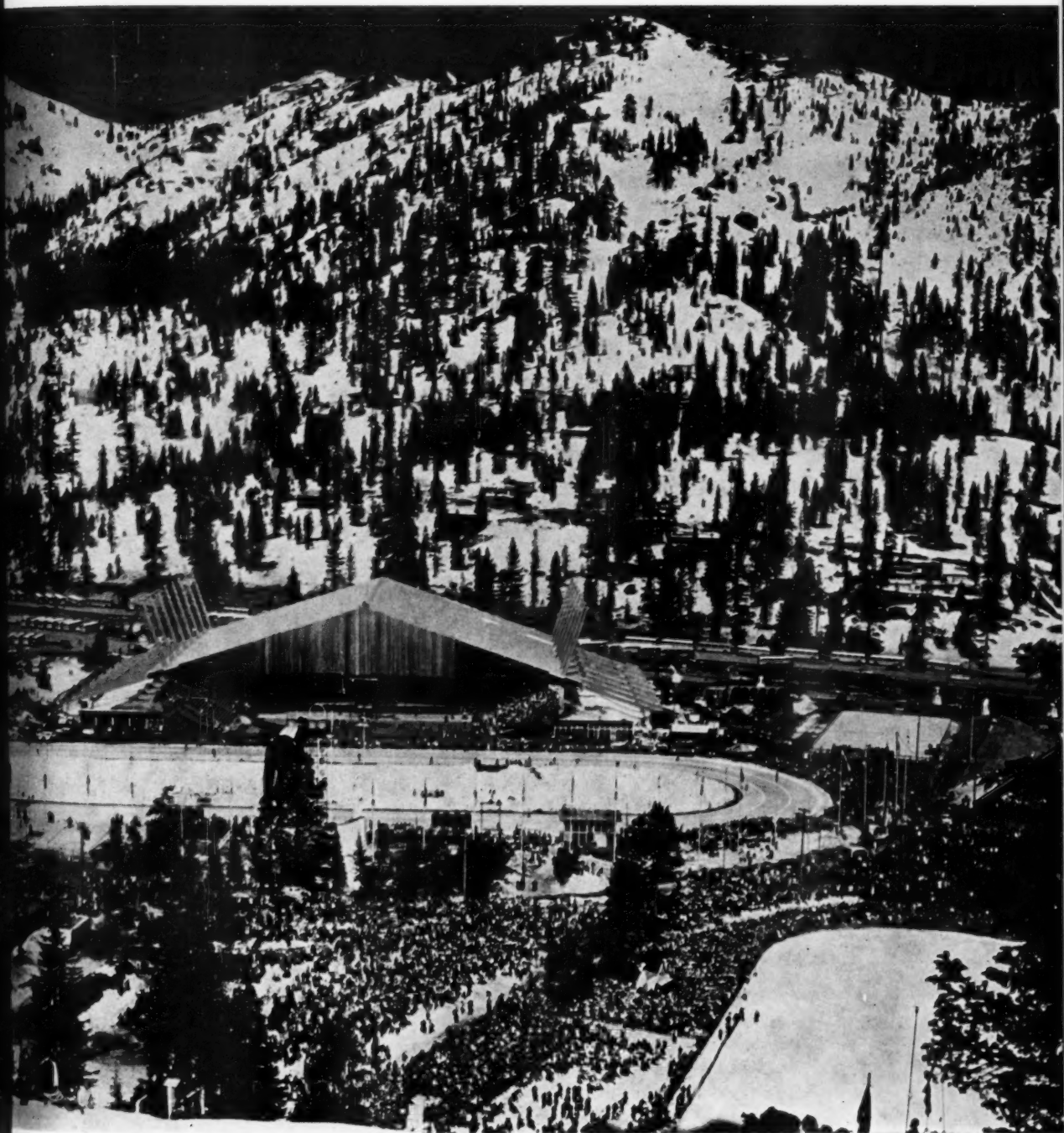


American **FORESTS**

The Magazine of Forests, Soil, Water, Wildlife, and Outdoor Recreation

APRIL 1960

50 CENTS



Snow Guardians at Squaw Valley • SEE PAGE 12

They're **BOTH WINNERS!**

No. 80 and No. 90

INDIAN

FIRE PUMPS

"MAKE A SHARP TEAM"

Glide to easy victory over small fires with **INDIAN FIRE PUMPS** . . . the extinguishers that can handle 30% of all your calls without laying hose.

Choose whichever model best suits your requirements but be sure to specify **INDIAN FIRE PUMPS** . . . they have no equal.

No. 90 INDIAN Fire Pump

(sliding pump type)



**BOTH MODELS APPROVED BY
UNDERWRITERS LABORATORIES**

No. 80 INDIAN Fire Pump

(lever type pump and handle)



INDIAN FIRE PUMPS
are advertised to
millions of readers . .

"We have used **SMITH INDIAN FIRE PUMPS** for many years. We need two more which please ship at once. We consider **INDIANS** to be the handiest piece of fire fighting equipment on our truck."

*F. H. Sanders, Mayor
Aliceville, Alabama*

Send for **NEW Catalog**

D. B. SMITH & CO. "FOR OVER 70 YEARS THE LEADERS" **405 Main St., Utica 2, N.Y.**

Pacific Coast Branches:

Hercules Equipment & Rubber Co., Inc.
San Francisco 7, Calif.
San Jose, Calif.

Halprin Supply Co.
Los Angeles 15, Calif.

Fred E. Barnett Co.
Portland, Ore.

Fred E. Barnett Co.
Klamath, Ore.

Mill & Mine Supply Inc.
Seattle 4, Wash.

L. M. Curtis & Sons
Salt Lake City, Utah

Canadian Agents:
Fleck Bros. Ltd.
Vancouver, B. C., Canada
C. E. Hickey & Sons, Ltd.
Hamilton, Canada



American FORESTS

PUBLISHED BY THE AMERICAN FORESTRY ASSOCIATION

AFA OFFICERS

Don P. Johnston • President
Edward P. Stamm • Vice-President
John M. Christie • Treasurer
Fred E. Hornaday • Executive Vice-President
Kenneth B. Pomeroy • Chief Forester
James B. Craig • Secretary

BOARD OF DIRECTORS

Wilson Compton, 1962 — Virginia, Chairman of the Board, Cameron Machine Company.
Charles A. Connaughton, 1961 — California Regional Forester, U. S. Forest Service.
George L. Drake, 1961 — Washington, Consulting Forester.

Albert Ernest, 1962 — Florida, Vice-President, St. Regis Paper Company.

Stanley G. Fontanna, 1960 — Michigan, Director, School of Natural Resources, University of Michigan.

Karl T. Frederick, 1961 — New York, Chairman, New York State Conservation Council.

Mrs. Katharine Jackson Lee, 1960 — New Hampshire, Connecticut River Watershed Council, Inc.

Henry T. McKnight, 1961 — Minnesota, Chairman, Keep Minnesota Green Committee.

George Wall Merck, 1962 — New Jersey, New York Zoological Society.

DeWitt Nelson, 1961 — California, Director of Natural Resources.

Richard J. Preston, Jr., 1960 — North Carolina, Dean, School of Forestry, North Carolina State College.

Carl F. Rehnberg, 1962 — California, President, Foundation for American Resource Management.

H. B. Shepard, 1960 — Massachusetts, Consulting Forester.

Philip W. Smith, 1960 — Pennsylvania, Dairy Farmer.

James J. Storrow, 1962 — Massachusetts, Vice-President, New England Forestry Foundation.

REGIONAL VICE PRESIDENTS

Southern: Vertrees Young, Louisiana. Gaylord Container Corporation.

Northeastern: Lloyd E. Partain, Pennsylvania. The Curtis Publishing Company.

Southeastern: X. L. Pellicer, Florida. Vice-President, The St. Augustine National Bank.

Western: W. S. Rosecrans, California.

Central: G. B. Bonfield, Michigan. Vice-President, Mill Division, Packaging Corporation of America.

HONORARY VICE PRESIDENTS

Mrs. Harold Christensen, Utah

Samuel T. Dana, Michigan

Paul M. Dunn, New Jersey

T. T. Dunn, New York

T. W. Earle, Georgia

Voit Gilmore, North Carolina

David James, Washington

Preston B. Kavanagh, District of Columbia

Harley Langdale, Jr., Georgia

Frank E. Masland, Jr., Pennsylvania

W. E. Merrem, Texas

R. Vance Miles, Jr., Alabama

A. W. Nelson, Jr., Ohio

Bernard L. Orell, Washington

Arthur N. Pack, Arizona

Ted S. Pettit, New Jersey

Mrs. Roland Robinson, Rhode Island

George A. Selke, Minnesota

John W. Squires, Mississippi

Peter Terzick, Indiana

Peter F. Watzek, Arkansas

The American Forestry Association, publishers of American Forests, is a national organization—independent and non-political in character—for the advancement of intelligent management and use of forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is to create an enlightened public appreciation of these resources and the part they play in the social and economic life of the nation. Created in 1875, it is the oldest national forest conservation organization in America.

James B. Craig
EDITOR

Betty Kindleberger
ASSISTANT EDITOR

James J. Fisher
ART DIRECTOR

Vol. 66, No. 4, April, 1960

CONTENTS

- 8 TWO BILLION SEEDLINGS
- 9 WASHINGTON LOOKOUT • Albert G. Hall
- 11 EDITORIAL—America's Loveliest Custom
- 12 SNOW GUARDIANS AT SQUAW VALLEY • W. S. "Slim" Davis
- 16 HONAUNAU FOREST • Norman K. Carlson
- 19 WHAT KIND OF A PARK?
- 20 DREAM ORCHARD • Jesse Stuart
- 23 GANGES CLEANUP AHEAD OF THE POTOMAC?
- 24 WINTERTIME U. S. A.
- 26 COVERED BRIDGES: LINKS WITH THE PAST • John T. Starr
- 28 THE JOLLY MONARCH
- 30 "PEOPLEITIS" DIAGNOSED BY FORESTERS
- 31 MULTIPLE USE GETS CONFIDENCE VOTE
- 32 ON THE CONSOLIDATION OF RESOURCE DEPARTMENTS
• Charles A. Dambach
- 37 READING ABOUT RESOURCES • Monroe Bush
- 38 ARBOR DAY AT KENMORE
- 54 WHAT'S NEW
- 68 FEATURE PHOTO OF THE MONTH

THE COVER

Squaw Valley on Tahoe National Forest was magnificent setting for the 1960 Winter Olympics. Photograph by Roger Johns, Forest Service, Truckee, California.

AMERICAN FORESTS is published monthly by The American Forestry Association at 919 Seventeenth Street, N. W., Washington 6, D. C. Subscription price is \$6 a year. Editors are not responsible for loss or injury of manuscripts and photographs while in their possession or in transit. The Editors are not responsible for views expressed in signed articles. Second-class postage paid at Washington, D. C., and at additional mailing offices. Copyright, 1960, by The American Forestry Association.

Forest Forum

The Hunter's Conflict

EDITOR:

Robert R. Bowers' article, "The Hunter's Conflict," published in March, 1960, was a most provocative and fair presentation of the farmer's problems. This article should be republished in the popular press such as *Reader's Digest*, etc., to obtain greater coverage and better understanding.

That the farmer has problems with so-called sportsmen can be confirmed by most farmers. My own experience is that they take every advantage of the farmer and the law, not entirely for the sport of hunting but for the sake of taking all the meat they can without regard for their needs. This includes shooting and taking my prize ducks and geese to garnish their Thanksgiving table. Trespassing over land recently planted to pines, they do not care where they walk or what damage is done to these small trees. Not being satisfied with disregard for ownership and the labor required to plant these trees, they will even remove the prize ones for their own Christmas use.

All farmers do not provide special plantings for wildlife. Many of us do and more would if they had any confidence in the hunting cult. This costs the farmer labor and out-of-pocket money to plant soybean and other wildlife plants which are never harvested. They are left for wildlife use during the winter when food is frequently not available for them. Others like myself, I am sure, make it a point to distribute feed such as "scratch" for use by wildlife when the ground is covered by snow.

In view of farmers' losses to the so-called sportsman and his disregard for property rights, all farmers should "post" their land and rigidly enforce this posting. Some so-called sportsmen will make threats. This has happened to me and my reaction is even more rigid enforcement, since I, too, like to hunt.

As pointed out by Bowers, I, too, have friends who come at appropriate times and help, only for the privilege of hunting. This privilege is granted with pleasure.

Under this system, which is fair to everyone, the game kill can be controlled to insure ample reserves to serve as a nucleus for next year's game crop. Under any other system, game can be, and in many instances is, slaughtered detracting from hunting pleasure rather than improving it.

Most sportsmen and so-called sportsmen take the position that the game belongs to the public and therefore they can trespass legally. Some national and state organizations advocate this principle. So long as this narrow-minded view is expressed, the farmer will be at odds with the sportsmen and so-called sportsmen. This is to the detriment of all.

The only fair and satisfactory solution to this problem, which becomes worse each year, is for the respective states to purchase land suitable for hunting purposes, these hunting reserves to be open to all licensed hunters. This to be paid for by those who hunt, through increased hunting license fees. This cost should not be imposed on other taxpayers, only the hunter himself

since it is specifically for his benefit.

It is time for all, including state and national organizations, to think in terms of 1960—and not 1760.

J. N. Borglin
215 West 37th St.,
Wilmington 2, Delaware

EDITOR:

The article, "The Hunter's Conflict," by Robert R. Bowers, which appears in the March, 1960, (Vol. 66, No. 3) issue of your *AMERICAN FORESTS* magazine is the best expression of opinions on this subject that I have ever read or heard. . . .

Paula P. Popko
936 N. Fairview Avenue
Lansing 12, Michigan

More On Multiple Use

EDITOR:

I have just read with interest the article, "A Second Look at Multiple Use," by Mr. Howard Stagner. In this article, Mr. Stagner states that "Multiple use has no validity when conceived as a method of operating an individual land unit." I feel that this assumption on his part is wholly in error.

Multiple use is much more than a planning concept. It is reality, present in the

everyday decisions of a district forester or ranger engaged in marking timber, measuring snow depth and water yield, taking game census, checking grazing permittees, or laying out roads or campsites. As a land manager, I have yet to encounter a completely homogenous unit (in either plant or animal life) which could be properly managed by a single principle for only one purpose. The public land manager of today must of necessity give priority to the primary purpose for which he manages his units. *However, this does not mean that all other uses must be subjugated or disallowed to achieve this primary purpose.*

Mr. Stagner states that timber harvesting is incompatible with the national parks, recreation, and wilderness area philosophy. He seems to imply that land once logged for timber harvest is lost forever to the people for all other multiple uses, including recreation. Does he realize that the expanded economy of these times will not permit these lands to lie idle, even for a short time? The private timber industry and the Forest Service are restoring these areas to timber either through natural or artificial means, usually in less than a year.

Mr. Stagner admits that "Most public lands, even though managed for a primary purpose, yield secondary benefits." All lands, be they public or private, under sound multiple use management will yield timber, water, wildlife, recreation, and forage plus the intangible values of aesthetic beauty, without sacrificing any of these on the altar of "single purpose use."

Hundreds of thousands of hunters, fishermen, campers and recreation seekers use and enjoy the cool woods and waters of the national forests and private timber companies. This testimony alone should illustrate that multiple use management is compatible with heavy recreational uses.

Proponents of "preservation" seem at times to lose sight of the fact that birth, life, catastrophe, and death are, and always have been, an integral part of nature's phenomena. Merely setting aside areas to "preserve" them for future generations does not guarantee that the forces of nature will cease to act and interact upon the plant and animal communities involved. "Status quo" is a situation entirely foreign to nature and constant change is to be expected. Isn't it true that any state of "balance in nature" is achieved by a wide variety of production, devitalization, and renewal? Man, then, if he is to contribute to this eternal process, must evaluate and make use of nature's resources in accordance with the dictates of this process. It seems to me that any single-use proposal therefore places a limitation upon managers of these lands which must of necessity be in conflict with the best interests of the natural process.

Mr. Stagner states that national parks are examples of lands managed on the basis of a primary purpose—to preserve a natural environment complete with native wildlife. If the bears rummaging for garbage in the refuse cans at Yellowstone Park are an example of native wildlife in natural environment, then I am completely confounded.

Allagash Report Readied

Speaking before the Northeastern Resources Committee at Providence, Rhode Island, on March 10, Conrad L. Wirth, director of the National Park Service, reported that his Service is preparing a report to the Secretary of the Interior on its findings and recommendations for "assuring adequate preservation of the natural and recreational values" in the Allagash River vicinity of Maine. The area embraces upwards of 800,000 acres of timber, most of it privately owned.

"Based on a series of field investigations conducted with the assistance of officials of that state (Maine), the Service believes that the Allagash River, including the major headwaters, lakes, ponds, and streams, merits preservation by some public means for wilderness recreation," Mr. Wirth said.

"One major complication to the preservation of this wilderness resource is, of course, the Rankin Rapids Dam proposed by the Corps of Engineers," Mr. Wirth added.



National Wildlands News

A NEWSPAPER DEDICATED TO NATIONAL PARKS, MONUMENTS AND WILDLIFE REFUGES

Now keep in touch with America's wonderlands—our national parks, monuments and wildlife refuges—through **NATIONAL WILDLANDS NEWS**. In eleven issues a year for only one dollar, this beautifully printed newspaper will delight and surprise you with its reporting.

Here are no time-consuming articles, but compact, easy-to-read news stories, forthright editorials and magnificent scenic and wildlife photographs. And that is not all. **NATIONAL WILDLANDS NEWS** advises you when to express your own wishes against schemes to commercialize these priceless sanctuaries.

Ideal for outdoor, wilderness and nature enthusiasts and for use in schools, colleges and public libraries, **NATIONAL WILDLANDS NEWS** is indispensable to you and to thinking Americans everywhere, who want to help preserve our glorious vacationlands as nature made them.

What Readers Say

Congratulations on **NATIONAL WILDLANDS NEWS**, which has appeared not a moment too soon.—David R. Brower, Berkeley, California.

Everybody should welcome honest, unfettered discussion of our precious wild lands.—Dr. Adolph Murie, Medford, Oregon.

There is a genuine need for such a paper, and I hardly see how we have gotten along without it thus far.—Dr. Clarence Cottam, Sinton, Texas.

Subscribe today by filling in the coupon and mailing it with one dollar.

Severey Butcher
Editor

State Group Hits Wilderness Bill and Cascades Park

In January, Congressman Jack Westland of Washington, on the floor of the

Mount McKinley—the Ideal Park

• "Look at those bear tracks," my wife exclaimed: "They are huge!"



Supt. Garrison Seeks Solution to Yellowstone Boats

Toward the end of the 1959 travel season, Superintendent Lemuel A. Garrison of Yellowstone National Park

EDITORIALS

Mission 66 Progress
There can be no

The Most Deadly Poison of All

Peddling poisons for killing anything which somebody happens not to want around, from plants to insects to mammals, has become big business across the earth in less than half a lifetime.

15,000 Texans for Padre Island, Three Against

At the hearing, December 15, held at Corpus Christi, Texas, by Senator Frank E. Moss, chairman of the Subcommittee on Interior Affairs, there was support for establishing Padre Island National Park. Houston Press re

Sec. Fred Seaton Saves Tule Lake Refuge

The Tulelake Irrigation District was notified, on December 11, by Acting

The Proposed Great Basin National Park

The area of the proposed Great Basin National Park was first brought to public attention by Weldon F. Heald of Tucson, Arizona, who explor

Director Wirth Speaks Out At Williamsburg

Discussing that phase of the National Park Service's Mission 66 program having to do with rounding out the national park and monument system, Director

Mountaineers' Glacier Peak Plan Hailed at Hearings

At hearings conducted by Regional Attorney C. C. Carlson of the Depart-



White Sands Blasted by Army

• ALAMOGORDO, Friday, May 14, following a series of preli

Hawaii National Park Puts on a Show

On the night of Saturday, No 14, following a series of preli

Ross Leffler Outlines Waterfowl Plight

On November 28, at Eugene Assistant Secretary of the

NATIONAL WILDLANDS NEWS
2607 CONNECTICUT AVENUE
WASHINGTON 8, D. C.

\$1 A YEAR

NAME _____
STREET _____
CITY _____ ZONE _____ STATE _____



Mortimer B. Doyle

NLMA'S Wood Promotion Program

TWO years ago the National Wood Promotion Program was little more than a dream. Today it is a living, vital force working to improve the fortunes of the lumber industry on several fronts," Mortimer B. Doyle, executive vice president of the National Lumber Manufacturers Association, told the Washington section of the Society of American Foresters last month.

Mr. Doyle listed the basic objectives of the promotion program as 1) to create a wider acceptance and appreciation of wood as a modern material by effectively presenting its generic advantages and attributes to target audiences concerned with its use in design, specifications, construction, distribution, and purchasing, and 2) to spearhead the total wood promotion effort currently engaged in by the federated associations, brand name manufacturers, and other factors of distribution.

Primary target audiences of the program are the home-buying public, architect-engineers, and builder-contractors. "We are reaching the home-buying public with advertising, direct mail, publicity, and, upon request, technical publications," Mr. Doyle said. These devices as well as technical field force contacts, technical publications, and seminars are being used to reach architects, engineers, builders, and contractors, he explained.

"Equally as important as the mechanics of coverage," Mr. Doyle continued, "are the messages reaching NWPP's target audiences. . . . So the fundamental goal of our promotional material is 1) to make NWPP's primary target audiences more fully aware of the unique natural qualities of wood, 2) to symbolize wood's varied contributions to livability in today's buildings, and 3) to increase the acceptance of wood by buyers when suggested by architects, builders, and dealers to establish a positive public preference for wood over competitive building materials."

After reviewing the dynamic campaign undertaken in 1959, Mr. Doyle outlined the promotion program for the current year. "In 1960, the purpose of the NWPP advertising directed to the consumer is to glamorize wood in much the same exciting visual way as in 1959," he said, "but in more specific terms of wood's components: flooring and stairways, framing, exterior siding and trim, millwork, doors and windows, cabinet-work and built-ins, interior decor and the like. . . . We plan to continue giving the architect 'inspiration by example' in the form of New Answers with Wood."

Then, turning to perhaps the most important target, the builder-contractor, Mr. Doyle announced that the theme, "Built of Wood Means Built to Sell," will be played to them over and over again. "In 1960," he continued, "we plan to use double-page spreads replacing the single pages of 1959. The copy and illustration here scores a bulls-eye by going directly to the builder's pocketbook, telling him that wood means built to sell and at the same time saves money in costs."

I do believe in the national park system and the benefits that accrue to the people from having such areas throughout the nation. However, I also believe that similar benefits can be obtained on other public and private lands without dedicating vast areas of productive land to single-purpose use for the ultimate benefit of a relatively small segment of our population. Human need creates a situation so variable that a flexible formula permitting constant adaptation is the only means by which we can avoid obsolescence.

Far from collapsing in the future, I believe that the everyday application of sound multiple use management will continue to be the only way in which land managers will be able to provide for the equitable uses and needs of all segments of our people.

Duane L. Green
Deputy State Forester
North Dakota Forest Service
Bottineau, North Dakota

EDITOR:

I've got a comment on Howard Stagner's "Second Look at Multiple Use." Print it if you like.

To paraphrase a classic author, forestry is a great and noble profession. The forester must be concerned with all of the soil, water, plants, and animals of the wild land under his care, including the recreationist—bless him.

To treat only the part without considering the whole would be a dereliction of his profession. Mr. Stagner's inference that foresters should be concerned only with sawtimber has all the earmarks of bigotry. Perhaps you did him a disservice in printing his speech.

Bob Stockton
2711 S. Adams
Olympia, Washington

Sand in Their Eyes?

EDITOR:

The article by William B. Morse on the Oregon Dunes in *AMERICAN FORESTS*, January, 1960, expresses many of the pros and cons of the proposed Oregon Dunes area. We agree that the area must be viewed in the perspective of "What is most desirable for the long-range benefit of all the people."

This is right! But look out lest some of the sand the zealous proponents of the Dunes Park want to conserve doesn't blow back into the eyes of the Oregonians.

The expanding and well-conceived Oregon State Park System already includes some of the dune area in question. The national forest comprising a major portion of the area is managed on a multiple use basis—giving full recognition to the recreational potential of the area. The tax-paying private forest lands are well managed to attain their full potential productivity. Through co-operation under the existing plans of these active agencies, the recreational, scientific, and conservation values of the area are recognized and being developed.

A basic fact overlooked in the discussions is that uncontrolled dunes are a ravaging sore spot on nature's surface, requiring years to heal. The control, stabilization, and revegetation of these dunes must continue, otherwise the state will have a liability that requires decades to correct. The millions of dollars spent on control by public agencies and the excellent work of the Soil Conservation Service for many years will go for naught.

Proposing to preserve sand dune areas, ignoring what has been accomplished

through co-operation of state, federal and private agencies in developing recreational opportunities as part of a multiple use program, is permitting the sand to blow into the eyes not only of Oregonians but "all the people."

Stuart Moir
Forest Counsel
Diamond Head Road
Oswego, Oregon

Fractionalization Opposed

EDITOR:

It is my understanding that Senator Francis Case of South Dakota has asked for 224 acres of land to be withdrawn from the Black Hills National Forest for the purpose of providing a private group with an opportunity to build a STATUE OF CHRIST.

May I say that this is fantastic to say the least. Public land should not be made available to any group that has various and diverse and sundry reasons as to how it should be used. This is especially true of religious groups or those who would use it to make a personal profit, such as putting up a hot dog stand.

If we were to fractionalize and cut and fragment every bit of land that some group sought for a purely selfish reason, we should have no land available for the public.

Even to lease or sell the land in question is no answer. We already face too many problems in regard to isolated pockets of land. All such requests should be strongly rejected.

Raymond Mostek
Vice-President
Illinois Audubon Society
615 Rochdale Circle
York Center
Lombard, Illinois

Will Not Renew

EDITOR:

Having read some of Mr. Pomeroy's article in the December issue of AMERICAN FORESTS and having heard of Mr. Peterson's views at other times, I can come to only one conclusion, namely, that Mr. Peterson seems more interested in keeping under his and his department's control some "pieces" of land than in seeing that the best interests of the American people—and I use the word "interests" in its broadest sense—are served, because it is patently true that nothing except that which is of exceptional scenic value will ever enter the National Park System. I think you will admit that, for example, logging of Yosemite valley would not leave it in the same kind of shape that would make it worthy of being in the National Park System; this is true also of the other areas currently being proposed for inclusion into the park system.

I think that this will be a good time for me to say that I will not be renewing my membership in your association, so please do not send a renewal notice upon the expiration of my membership.

Ralph H. Stringham
622 East La Habra Avenue
La Habra, California

Ovid Butler

EDITOR:

... This happens to all of us sooner or later, but I think that conservation-minded people will recognize in Ovid Butler a strong fighter and doughty soldier of the cause.

Arthur N. Pack
Charles Lathrop Pack Forestry
Foundation



Senator B. Everett Jordan

AFA'S North Carolina Study

SENATOR B. Everett Jordan of North Carolina announced to the United States Senate last month that The American Forestry Association had undertaken a landownership study in North Carolina, the third state to be studied in this respect, and suggested that other states and the federal government should consider the need for similar studies.

"As senators know," Senator Jordan declared, "the productivity of forest land and its availability for uses other than timber production often hinge upon the identity and objectives of the owner. . . . It becomes apparent then that ownership of land is one of the key factors in evaluating the contribution of forest resources to the future economy of the nation and to the social well-being of its citizens. It affects such vital matters as purpose, continuity, and intensity of forest practice; feasibility of multiple-use management; establishment and stability of wood-using industries; utilization of water for industrial, agricultural, municipal and recreational purposes; encouragement of service facilities, such as resorts; and community support in the form of taxes or contributions in lieu of taxes."

Senator Jordan then listed some of the problems for which the landownership study may find a solution. "What changes in ownership and management of forest land will contribute most effectively to development of the economy on a sound and permanent basis? What percentage of recreational, watershed, or timber lands should be in county, state, federal, corporate, farm, or other ownerships? What pattern should these ownerships form? What considerations motivate small woodland owners? How can they be stimulated to practice better forestry?"

AFA's landownership studies, all privately financed, are the outgrowth of recommendations of the Fourth American Forest Congress. The senator explained that the association assumed responsibility for pilot studies in three states with strikingly different ownership patterns: California, where the federal government owns more than half the land; Minnesota, with predominantly state and county ownerships; and North Carolina, where 92 per cent of the forest land is held by 268,000 owners.

Reviewing the accomplishments of the California and Minnesota surveys, Senator Jordan said, "The suggestions of the initial investigation in California, completed in 1958 with publication of *California Lands—Ownership, Use, and Management*, are now being studied more intensively by a committee of the California Legislature. Also, a Wildland Research Institute has been created at the University of California to determine better ways of managing the resource. The second survey is in its final stages in Minnesota. An Interim Committee of the State Legislature already has picked up the preliminary recommendations with a view to introducing corrective legislation. . . ."

At 30° below



TORTURE TEST NO. 71-42-8

McCulloch ONE/70 direct-drive chain saw subjected to -30° F. for 40 hours. At completion of impound period, saw tested for starting and wood-cutting performance. No adjustments made.

RESULTS: On first pull of starter rope engine turned easily and smoothly. Second pull produced partial combustion. Third pull resulted in full power start. Saw idled and accelerated smoothly. Subsequent wood-cutting analysis proved torque and RPM excellent.

M
N
S
d
p

LEA

M

Nu

For fre

McCullo
McCullo

or 120° above...

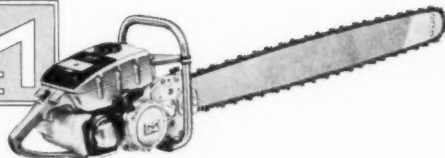
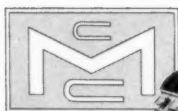
McCulloch's new
Number One saws
start in seconds,
deliver smooth
power right now!



PLACE: Mojave Desert, California. MAX. AIR TEMP: 119.6° F. STARTING: Maximum 3 pulls. MAX. ENGINE TEMP. AT SHUTDOWN: 432.2° F. TYPE OF WOOD CUT: Oak, Fir, Pine, Cedar. PERFORMANCE: Full power. Constant torque transmission to chain.

A man who makes his living with a chain saw can't always wait on the weather. That's why we put our new McCulloch *Number One* saws through brutal torture tests to prove they start fast and keep cutting strong in arctic cold or blistering summer heat—or any weather condition in between.

Temperature is just part of the story as far as our tests at McCulloch are concerned. We put our new *Number One* saws through the most severe torture tests our engineers could think of. Starting tests. Endurance tests. Field tests. And, finally, tests on the job by hundreds of professional loggers and woodcutters throughout the country. Altogether, more than 40,000 man-hours and \$1,000,000 were spent testing the *Number One* saws. The results prove that, dollar for dollar, pound for pound, McCulloch is *Number One*. Reliable. Lightweight. Powerful. Easy on the man. Try *Number One* at your McCulloch dealer.



ONE / 80 Gear-Drive

- More lugging power than any other saw its size
- Only 25 pounds • Takes bars up to 44"
- Takes 15" plunge bow • Dynamically balanced
- Pintail Chain. • Seven models to choose from.

Prices start as low as \$154.95

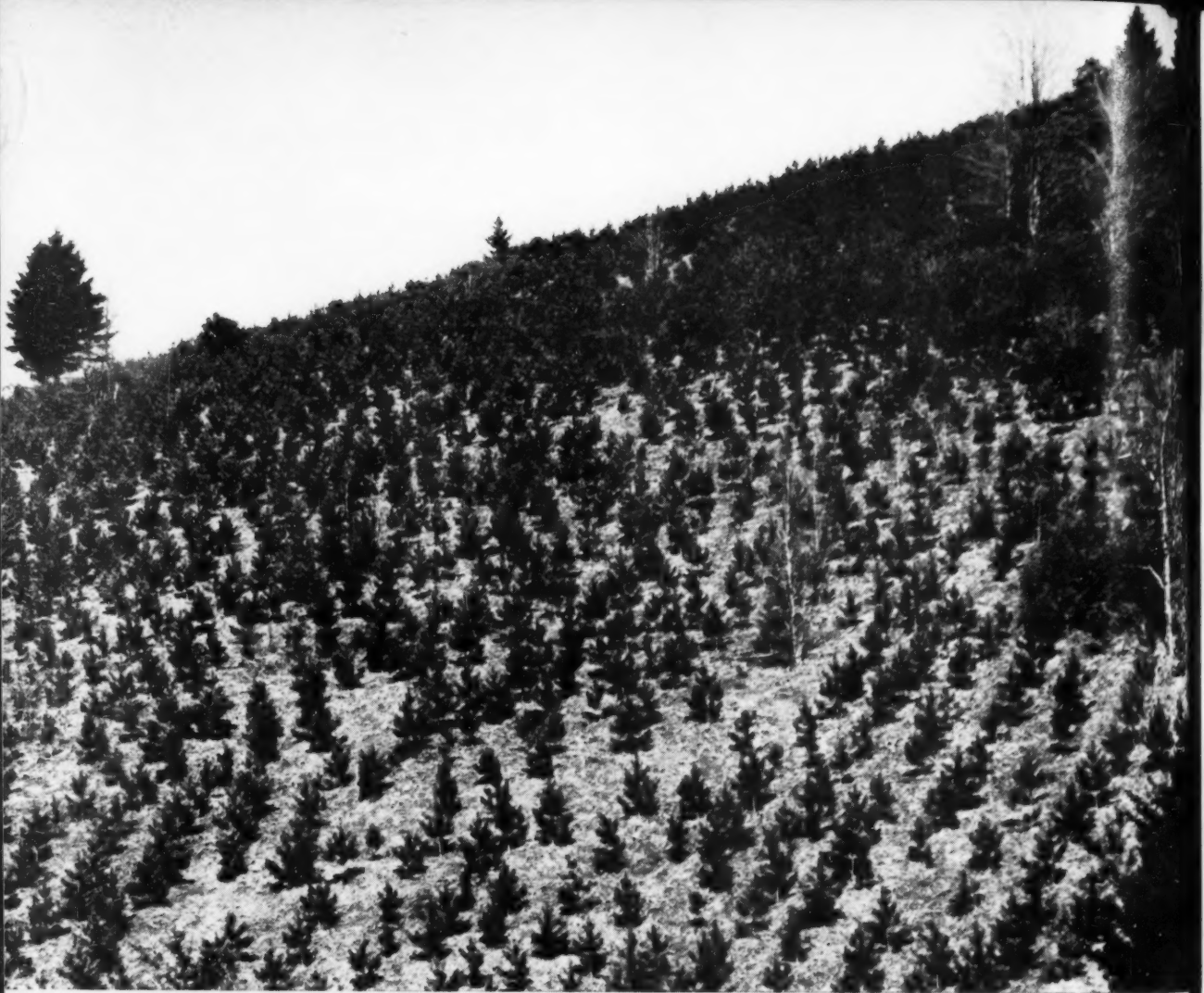
LEADERSHIP THROUGH CREATIVE ENGINEERING

McCULLOCH CHAIN SAWS

Number One In World Sales

For free booklet write McCulloch Corporation, Los Angeles 45, California, Dept. A-3

McCulloch Corporation, Los Angeles 45, Calif. • Marine Products Division (Scott Outboards), Minneapolis, Minn.
McCulloch of Canada Ltd., Toronto, Canada • McCulloch International Inc., Los Angeles 45, Calif.



Despite last year's tree planting record, the rate of planting will have to increase annually to meet timber demands.

TWO BILLION SEEDLINGS

AN all-time high of over two billion trees was planted in 1959 largely as a result of the tremendous increase in planting on private lands, Secretary of Agriculture Ezra Taft Benson announced last month.

The Forest Service summary of reports from its field offices, state foresters and other federal departments shows 2,118,471 acres were planted.

One-third of the land planted, or about 700,000 acres, was cropland placed in the Conservation Reserve

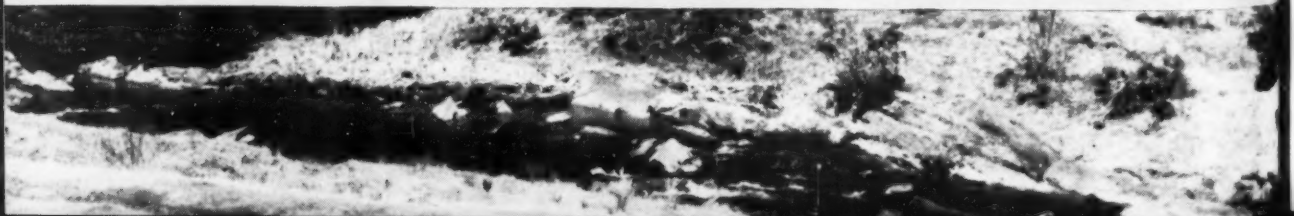
program under 10-year contracts. Under the Conservation Reserve, farmers receive cost-sharing help to place in conservation uses land voluntarily retired from crop production.

During the past two years forest and wind barrier tree planting has leaped from one million acres in 1957 to 1.5 million in 1958, and 2.1 million in 1959. This compares to 497,507 acres planted in 1950 and 812,588 acres in 1955.

Tree planting on privately owned

land jumped from 1,326,370 acres in 1958 to 1,884,071 in 1959. Planting on federal land rose from 133,509 acres to 167,610, while planting on other public lands decreased slightly.

"We're delighted to see an increased interest in tree planting, particularly by private landowners," Secretary Benson said, "because we have a lot of idle forest lands to get into full production if we are to have the forest products needed in the future."



Washington



Lookout

By ALBERT G. HALL

MULTIPLE USE BILLS RECEIVE HEARING: SO FAR

a total of 50 bills have been introduced in the House and one in the Senate "To authorize and direct that the national forests be managed under principles of multiple use and to produce a sustained yield of products and services." Hearings before the House Committee on Agriculture, February 16 and 18, indicated practically unanimous agreement among the witnesses with the basic principle of the proposed change in the laws applying to national forest management. (See article on page 31.) The U. S. Forest Service has developed a pattern of management which has recognized the multiplicity of goods and services which can be produced from the national forests. Although the basic authority for the establishment of the national forests indicates watershed protection and timber production as the primary objectives, no quarrel has been found with the multiple-use concept. The Congress has approved programs for recreation, wildlife, grazing, for example, and has backed up such approval with appropriations. Court tests have sustained the judgment of the Forest Service in permitting or limiting various uses of the national forests. For these reasons, many persons believe that the specific requested legislation is unnecessary, but they also do not object to it.

OBJECTIONS TO THE IMPLIED EQUAL STATUS OF

any and all possible goods or services of the national forests were expressed by a number of witnesses, who although supporting the concept of multiple use, saw the need for priority guidance by the Congress—not priority determination for specific areas, but the type of guidance which is inferred in the basic national forest legislation. Thus, it was proposed by those witnesses chiefly concerned with the economic development of the country that water and timber protection and pro-

duction still be retained as primary objectives of national forest management. Proponents of wilderness preservation requested that wilderness be specifically included in the listing of multiple uses. Wildlife and fisheries representatives wanted assurance that the authority of state fish and game agencies would not be weakened. From the reactions of the House committee members to both the support and to the suggestions for modification of the bill, it is apparent that the proposal will not be considered as minor legislation.

THE OREGON NATIONAL SEASHORE PROPOSAL HAS

had a new factor added to it by the introduction of a new bill by Senators Mansfield of Montana and Kuchel of California. It is a bill "to establish the Richard L. Neuberger National Seashore," which is a modification of the one most recently introduced by the late Oregon senator, embodying many of the amendments suggested by Oregon's Governor Hatfield. It is believed that the Mansfield-Kuchel Bill, S. 3211, will take priority over earlier bills affecting the Oregon seashore. The proposed dedication of this somewhat controversial park establishment in memory of its principal sponsor prior to the bill's enactment may serve to preclude some objections to the park proposal itself. It is possible that the seashore proposal will not receive the dispassionate consideration necessary to this innovation in federal land policy if the measure is prominently advanced as a monument to a popular legislator.

RESOURCE MANAGEMENT ON RESERVOIR AREAS HAS

advanced a step nearer realization by the passage by the House of a bill to require the development and maintenance of reservoir areas under sustained yield programs to increase their value for timber production, (Continued on next page)

recreation and other goods and services. The bill was amended in committee so as to be applicable only to areas owned in fee, not to those adjacent areas on which the Corps of Engineers has flowage easements. Almost three-quarters of a million acres of federally-owned lands above the normal reservoir pools are suitable for timber production. Existing acreage in Corps of Engineers reservoir and navigation projects totals 3,959,385 acres in fee ownership, of which 2,057,860 acres are above normal pool levels, and of the latter 745,564 acres are suitable for timber production. While the Corps of Engineers has been working with the Soil Conservation Service in the management of these lands, the total of such work has been relatively insignificant. Specific authorization, as proposed in the current bill, would permit the Corps to include land management requirements in its budget requests. The House Committee on Public Works, in reporting the bill, H. R. 3377, introduced by Representative Smith of Mississippi, stated its belief that the value of the sustained yield from conservation practices would offset any cost which might be involved in planning or administering the program.

THE FORESTRY BUDGET FOR FISCAL YEAR 1961

has been passed by the House, following the recommendations of its Appropriations Committee. Only change made from the Administration's budget request was a reshuffling of \$1 million within the total request for national forest management and protection. This \$1 million deducted from a request for \$14,830,000 for recreational developments on the national forests was redistributed among other national forest activities as reported last month in this column. The House also sustained its committee's reduction of \$250,000 from funds for acquisition of land within the Superior National Forest, allowing for Fiscal Year 1961 \$750,000 for this purpose. To provide for deficits incurred in the current fiscal year, the House has approved supplemental appropriations for forest fire suppression on federal forest lands, as follows: Forest Service, \$20,450,000; Bureau of Land Management, \$2,450,000; Bureau of Indian Affairs, \$310,000; National Park Service, \$125,000. The Senate Appropriations Committee has, however, recommended increasing the allowances for Bureau of Land Management, Bureau of Indian Affairs, and National Park

Service to the Administration's requests of \$2,800,000, \$360,000 and \$150,000, respectively.

CHANCES OF THE PASSAGE OF A WILDERNESS BILL

during this Congress appear to be slimmer than was the case earlier in the year. Amendments to the wilderness proposal previously submitted by Senator O'Mahoney of Wyoming have been supplemented by still further amendments suggested by Senator Allott of Colorado. As variously amended, the proposal is now rather confused and it is unlikely that a "clean bill" can be reported and passed by the Senate in its few remaining months. The amendments relating to water, minerals, grazing, and other uses and services to be derived from federal lands have pointed up the specific issues and questions relating to the proposal.

SEVENTEEN CONTROVERSIAL MINING CLAIMS COVERING

227 acres in the Umpqua National Forest, Oregon, will be the subject of a public hearing to be held in Eugene, May 3. Timber on the claims was valued at \$24,400 in 1957. If the claims are found to be valid the claimants will obtain ownership of the timber as well as the underlying minerals. The claims have been in existence for over 50 years and patent application has been pending since 1953. Under the federal mining laws, applicants have only limited surface rights prior to patent.

ONE-HALF OF OUR FUTURE TIMBER WILL HAVE TO

come from small forest properties, Richard E. McArdle, chief, U. S. Forest Service, told the American Paper and Pulp Association at its 83rd annual convention in late February. "Basically the physical forestry measures essential to put these lands in shape can only be bought, ordered, persuaded, or obtained by some combination of these three. One thing appears to be clear. Persuasion alone is not getting the job done fast enough," he said. "Personal philosophies of government, psychology, budgets and political science all get involved, and as a result the lands tend to stay in poor shape." He indicated that philosophies as they apply to the small owner may have to undergo a change. "The fateful decision here is whether men of policy and power will have the foresight and, if I may say so, the 'guts' to partially compromise deepset philosophical convictions in order that these lands may contribute their essential share to our raw-material base."

AMERICA'S LOVELIEST CUSTOM

Students at Kenmore Junior High School at Glen Carlyn Park, Virginia, were very proud last year when they moved into their modern new school building. They did not feel the same way, however, about the 33-acre site on which the new school is located. Unfortunately, the bulldozers had removed everything including the trees. The school grounds resembled a wasteland.

The students decided to do something about this. Hearing of their hopes, Boris Timchenko, well-known Washington landscape architect, offered to landscape the site if the students could raise \$600 for planting stock.

Without delay, a Green Thumb Committee of students launched a campaign. Competition among the various home rooms soon became intense in raising funds for the drive from "spending money" and any and all other ways and means. Even so, it was tough sledding until nature herself gave the students a helping hand by blanketing the area with three successive heavy snowfalls.

Boys seized the opportunity and went to work shovelling snow. One boy contributed \$14. Others contributed lesser amounts. Not to be out-done by the boys, the girls hired out as baby sitters and also helped to swell the fund. Just prior to Arbor Day (the second Friday in March under Virginia law), the Kenmore students were over the top on their fund-raising campaign and an Arbor Day celebration was planned in the form of a special assembly.

At this ceremony, Mr. Timchenko presented the final plans for the landscaping program. (See page 38.) Chief Forester Kenneth B. Pomeroy of The American Forestry Association made the keynote address on the subject "Why Arbor Day?" A special Green Thumb choir provided music. To the top homeroom, section 8-16, went the honor of electing the Green Queen. They chose their teacher, Mrs. J. B. Webb. Needless to say, the program was a huge success.

This Kenmore program is not an isolated incident. It is typical of a trend that has been going on in the United States for a number of years and marks a departure from the Arbor Day ceremony of old. In New York State years ago one recalls that pupils had a half-holiday and a single tree was planted somewhere on the school premises with an appropriate ceremony. This came about the same time as sulphur and molasses and shortly thereafter we would be following the plowed furrows scrounging for angle worms for a first spring visit to the old fishing hole.

Today, on the other hand, a typical Arbor Day program likely as not will find a student body planting a whole forest instead of a single tree. George Duthie was the first to point up this trend in his report in *American Forests* of May, 1953. Following a state-by-state survey, he found that no less than 1,426 schools in the nation boasted school forests on 129,536 acres of land. Both the number of schools

and the acreages have been substantially boosted in recent years. At the same time, Mr. Duthie discovered a total of 739 county forests with 3,414,078 acres; 899 municipal forests with 794,511 acres; and 162 organization forests (churches, clubs, etc.) with 43,912 acres. Many of these forests traced their origins directly to Arbor Day observances.

In another survey for *American Forests* in 1949, Nort Baser learned that while most states still follow Arbor Day customs of old, a new trend in western states was the replanting of burned-over areas by school pupils. So the custom has tended to expand in size as years have gone by rather than to become diminished as some believed.

In any event, J. Sterling Morton, the founder of Arbor Day, "really started something," as Mr. Baser reported. Mr. Morton, a Nebraska homesteader and a former AFA president, persuaded his state to hold the first Arbor Day observance exactly 88 years ago this month. His efforts received a tremendous boost in 1882 from another president and the founder of AFA, Dr. John A. Warder of Cincinnati. Working with Superintendent of Schools John Peaslee, of Cincinnati, Dr. Warder drew 25,000 people to Eden Park in that city where, for the first time, school pupils planted trees in honor of many famous men. Not long thereafter the custom had spread to every state in the union, Canada, Hawaii, and Puerto Rico.

As of today, only one small cloud appears in the Arbor Day future, that being a tendency by just a few states to discourage the planting practice by schools due to terrific demand for planting stock from other quarters. While appreciating the problem, we still think this is a mistake. Like most efforts for our schools, it is impossible to measure those efforts in the form of tangible returns. We simply know they are good things and ought to be encouraged.

Speaking of education, AFA becomes increasingly aware of the fact that in a short 15 years it will celebrate its centennial. That being true, a renewed effort is being made to emphasize the old customs and the old traditions and the importance of cherishing them. Of these customs, it is generally conceded that Arbor Day is the loveliest of them all and that its annual observance should be closely linked with a stepped-up effort to acquaint our youth with the importance of trees in their relationship to other living things. This is not an attempt to minimize the techniques of forestry which have made great gains in recent years. Rather it is an effort to maximize love of trees for the sake of trees themselves and to show their importance in the whole chain of life. For, in our opinion, if love ever goes out of the conservation movement, conservation will have had it.

The inscription on the Nebraska monument to the late Mr. Morton, founder of America's loveliest custom, says it all and says it well. It reads: "Other holidays repose upon the past; Arbor Day proposes for the future."



At Squaw Valley Forest Service snow safety experts eliminated avalanche hazards before they had a chance to become dangerous.

snow guardians at s

The Olympic Committee's Snow Safety Team, under the supervision of the U. S. Forest Service, declared war on the avalanche and provided emergency snow rescue help, thus insuring the success of the Winter Olympics



Avalanche control expert Monty Atwater, right, and snow safety crew used recoilless rifles to destroy dangerous snow pile-ups.



Photos courtesy of U. S. Forest Service

Squaw valley

By W. S. "SLIM" DAVIS

Chief, Division of Recreation,
California Region, U.S. Forest Service

SEEING a snow ranger inspecting a ski slope at the Squaw Valley Olympic Games in the Tahoe National Forest, a young woman spectator called to him: "Say, what do you rangers do in the summer?" This turnabout from a question forest rangers often hear in the field points up the extent to which the Forest Service has taken hold of winter recreation activities. That the question came at this particular time indicates the key role the Forest Service played in the VIII Olympic Winter Games.

Besides the more dramatic avalanche control work that safeguarded the lives of competitors as well as thousands of spectators, foresters wielded a strong hand in planning and preparing for the games, and in preserving the natural beauty of the forest setting.

Snow safety work, though on a much larger scale here, was not new to the Forest Service. Squaw Valley is only one of scores of national forest winter sports areas. Others, such as Stevens Pass, Mount Hood, Aspen, and Alta have until recently been even better known. But large or small, famous or only locally-known, these winter recreation areas are all part of the multiple use concept under which national forests meet the numerous and growing demands on public lands. Skiing and other forms of winter recreation are "naturals" in the national forests of the snow belt, as millions of satisfied users can testify. And these activities take place on the same lands which also provide stable watersheds, timber, grazing, summer recreation, and other resources.

To give you a vignette of our

safety work in action, let me call on a professional at describing action. By permission, I am using an eyewitness account of one foray against the enemy avalanche. Written by my friend Oscar Fraley of United Press International, the following news story was sent out during the games:

Squaw Valley (UPI)—The snow cat tilted precariously as it clawed its way up the steep side of the mountain through the early morning light and the 30-mile an hour wind whistled through the giant silver-tip firs.

Up and up it growled until finally it panted to a stop at the crest of Squaw Peak, highest elevation in the valley. Three thousand feet below slumbered the Olympic Village and on the peak a towering cornice of snow and ice—much like a huge wave—curled out from the top.

"Avalanches are dangerous and destructive things," said squarejawed Dick Stillman of Rochester, New York, and Berthoud Pass, Colorado, chief of the 11 rangers of

the U. S. Forest Service Safety Snow Team.

"That hundred-ton overhang," he said, pointing upward, "could slide and cut loose 400,000 tons of snow. Really dangerous. You know, in the Austrian Alps during World War I, a total of 10,000 soldiers were killed by avalanches in one 24-hour period."

Surely and efficiently his men had gone to work. Two hundred bangalore torpedoes, the kind they planted under tanks in World War II, were "seeded" into the cornice. . . .

Stillman checked through a walkie-talkie on the progress of the "seeding."

"This thing, if it cut loose, could bury the men's downhill course," he explained. "So we have to get it out of the way, and we have to do it before the valley gets filled with people."

"There are a number of ways to break up an avalanche before it can get started," Stillman explained. "Sometimes we blast them away with a pair of 75 millimeter recoilless rifles furnished by the Army. Sometimes we can 'ski them off,' and that can be nasty. But for this job, the bangalores are best."

The walkie-talkie buzzed and Stillman, after listening, announced:

"They're all set to go. Now we light the fuse and we have three minutes to get out of the way."

From the crest a warning rocket curved across the blue of the sky. Stillman, looking up from the base of the 42-degree slope, cautioned:

"Watch out for huge blocks of ice rolling down. If I yell 'run' don't waste time looking. Just run and get behind one of those big trees."

Then he started the countdown . . . "two minutes . . . one minute . . . 30 seconds . . . five seconds . . . she oughta go right now."

Nothing happened. Another minute went by; and then there was a crash which shook the valley, and the cornice erupted into the air. Snow cascaded down the mountainside. "Look out for that big block," Stillman yelled.

But the two-ton block of ice rolled to a halt 20 yards away and gradually the slide settled out flat.

"That's it," Stillman shrugged casually. "As far as we can tell, that's the last avalanche hazard in the valley, until the next storm."

The snow cat began to screech its way down the precarious slopes. Far below, the skiers flooding into the valley were unaware that through icy hours the unsung rangers of the Forest Service had been working to assure their safety."

Just as it is at any other recreation area on the national forests, the Forest Service had a land management responsibility at Squaw Valley. About 1,000 acres of the Squaw Valley development, including the ski runs, tows, and the ice area are within the Tahoe National Forest. Our job there was to 1) provide co-ordinating land management services, 2) supervise and inspect snow safety plans and avalanche control measures, and 3) give technical assistance and emergency snow rescue help.

In the pre-war days the Forest Service stimulated winter sports by clearing ski trails and building public warming shelters in areas where the rapidly-budding sport was gaining a foothold. Today the winter sports business stands on its own feet, and national forest areas are commercial ventures. They are operated under a special use permit procedure which provides for development in line with approved plans and operation under the administrative eye of the Forest Service. The

usual procedure is to publish a prospectus or business offering when public needs warrant a new area, and the bidding is often brisk. In the operating plan which is part of the ensuing special use permit, it is frequently necessary to incorporate special snow safety provisions, and this was the case at Squaw Valley. The awarding of the VIII Olympic Winter Games to that site in 1955 only accentuated the need.

Although no one was aware of it at the time, issuing an area development permit to the Squaw Valley Development Company in 1948 was in effect the beginning of preparations for snow safety at the winter games 12 years later. The company owned some property in Squaw Valley but also needed to use the surrounding national forest land in order to have a well-rounded operation. With the issuing of the permit we began a regular program of winter sports administration, headed up by snow ranger Nelson Stone of the Tahoe National Forest. It included gathering data on snow depths, prevailing winds, cornice and wind-slab formation, and avalanche occurrence.

When the decision was made to hold the Olympic Games at Squaw Valley, the Forest Service transferred in Monty Atwater, the outstanding avalanche control expert in the United States. I had come to know

(Turn to page 40)

The Olympic Committee's Snow Safety Team led and trained by U. S. Forest Service helped make Olympics possible. Leader Dick Stillman, front row, third from the left.



The spectacular winter sports events at Squaw Valley drew 220,000 visitors





Trees that lined each side of the ski jump protected skiers from high winds

Left: Slim Davis, Forest Service, in charge of recreation for Region V; Heini Klopfer of Germany, designer of ski jump; Helmuth Recknagel also of Germany, winner of the gold medal in the 80 meter ski jumping event

When the 1960 winter sports events were completed at Squaw Valley the Olympic flag was furled and prepared for shipment to Rome where it will fly at Summer Olympics



Snow-Ranger Paul Hawk helped inspect all trees for soundness before the games.





Honaunau

CREATING a thriving forest enterprise from the decadent Honaunau forest may be the key to easing Hawaii's critical lumber shortages. So desperate is the new state for timber that land managers are re-examining this rain-drenched upland forest for future timber production, while still protecting the vital watersheds of the region.

Honaunau forest covers 10,000 acres in the center of the Kona District on the island of Hawaii. The forest boundary is about three and a half miles inland, and follows roughly the 2,700-foot contour of the arid Kona shoreline. Then, some four miles further inland, on the long lava-formed slope of Mauna Loa, the forest reaches an elevation of 4,700 feet. However, this tropical forest, soggy wet most of the time, is almost impenetrable. For this reason, the Honaunau forest is not much different than it was when Captain Cook first anchored in Kealahou Bay in 1778.

Pre-Captain Cook Hawaiians built their grass shacks along the warm shorelines. They fished in the ocean. They grew sweet potatoes, taro, and other crops in the one-to-three mile strip of cool, moist uplands, a mile or more from their shoreline villages. When they needed timber for a grass shack, or a new canoe, they would walk three and a half miles or more to the wet forest jungle. After a kahuna (Hawaiian priest) had selected a suitable tree, the Hawaiians would cut and drag it down to the warm shoreline. With stone adzes and coarse rocks, the artisans would shape a canoe, fashion an idol, or notch the timbers for a new house.

The Hawaiians did not linger overlong in the cold, dark, wet, gloomy forests where the rains sometimes fell so heavily and so long that raging streams formed. Coursing down through the forest and among the lower coffee lands, a stream usually disappears into some lava tube.

An Australian red cedar has grown to height of 110 feet in 22 years.

Maui Forest

By NORMAN K. CARLSON

Through research and experiments Hawaiians are trying to establish forest industries capable of supplying the islands' mounting requirements

Seldom does a stream empty into the ocean. These brown, turbulent waters seldom flow more than one to six hours.

Normally the heavy vegetation catches the rain drops and breaks them, and the water slides down the tree trunks, off the ends of the leaves, or mistily falls to the verdant but rocky floor. Rapidly disappearing through the many-layered lava flows, the water eventually comes to a partial rest in an underground water lens, or is cooped up in some dike complex.

Water is the key to the full and continuing best use of the islands. First we have to find the water, then tap, pump, and distribute it. We must not waste nor lose it through mismanaged watersheds.

Water makes the arid shorelines come to life. Here the retired people prefer to live, the tourist likes to play, and the islander loafs. These people must also have shelter, and this means lumber. Each year Hawaii imports 100,000,000 board feet of fir, pine, cedar, redwood, oak, Philippine mahogany, and other woods. From our Hawaiian forests

we cut about 200,000 board feet of lumber, an insignificant two per cent of the islands' yearly needs. We believe we can use these rain-drenched uplands to help satisfy timber requirements and still not damage our vital watersheds.

The Honaunau forest presents a fine area in which to start our work. It is a decadent forest. It is in an area where a mistake in forest management would not seriously affect the community below. Its area of 10,000 acres is large enough to be practical for a future sawmill.

During the past three years, we have built roads through the forest and studied the soil, climate, animals, and vegetation.

Soil? An Iowa farmer would scoff at the word, yet he would wonder, too. Under the persistent rains that wash the mid-elevations of Kona, plant life exists under more of a hydroponics than a soil growth media. Coffee, pasture, and forest trees grow on lava rock. Countless lava flows, spewed out of Mokuweoweo crater or through rifts on Mauna Loa, have crawled, walked, or run down the Kona slopes, some stopping

only when they hit the ocean. Through the thousands of years, the flows have varied in frequency and differed in depth, width, and material. However, each new lava flow covered an older flow and its vegetation as it burned its way down the slope.

We don't want any more lava flows in Kona. Yet if we could have chosen the lava, we would have ordered an aa (aw-aw) flow. Aa lava rock is quite hard. It is made up of broken clinkery, a sharp material that is a few inches to a foot or so in size. The rain that falls on this lava seeps between and over the rocks, slowly eating at the exposed surfaces and coating the aa with moisture. Plant and tree roots finger through the aa, extracting minerals and moisture from it.

Pahoehoe (pa hoy hoy) is the other kind of lava flow. This softer rock presents a surface that looks like a smooth macadam highway or a pan of fudge. Like a highway, the pahoehoe is impervious to water and plant roots. In the level wet belts, when the pahoehoe is covered with soil, we end up with a swamp.

Each man plants from 400 to 600 trees per day. The seedlings are watered by daily afternoon rains.



The densest vegetation and the largest trees in the Honaunau forest are usually found on the aa flows. Where the pahoe-hoe is covered with soil, and slopes provide good drainage, the trees are still large. Where the pahoe-hoe has little soil, tree growth is stunted.

The distribution and amount of rainfall determines the character of the Hawaiian landscape. Rainfall also determines the breakdown rate of the new lava flows. In the wet belt vegetation appears soon after a lava flow. In the dry belt it takes hundreds of years to change the forbidding black lava to a desirable landscape of green growing plants and trees.

Along Kona's shoreline, rainfall seldom exceeds 20 inches a year, and much of this could drop in one week. After a heavy rain storm, the sun is warm and the black lava shimmers with heat. It takes a hardy plant to survive these conditions.

But at 2,000 to 3,200 feet, a month seldom passes that there is not an inch or more of rain. Fog is common. Yearly rainfall averages about 100 inches.

Ascending the hill to 4,700 feet, rainfall drops to a mere 45 inches per year. It is usually cool and often foggy. The temperature sometimes drops to freezing at this elevation.

With this variety of climate, one would expect to find an abundance of animal and bird life, especially in the wet and green forests. This is not so. There are few birds in the



This sawmill is capable of cutting from 3000 to 5000 board feet of lumber per day. Mills of this type rarely produce more than 200,000 board feet a year.

forest, and of these the Hawaiian crow is the most vocal. Pigs, which came to the islands with the Hawaiians a thousand years ago, are sometimes numerous, sometimes scarce. Once 1,000 head of wild cattle roamed the Honaunau forest. We fenced the 10,000-acre forest, invited in the hunter, and today a wild cow is a rare item.

With the forest fenced, the cattle gone, the pigs reduced by continued hunting, we are now ready to use the Honaunau forest for something besides a water catchment area.

Before detailing a fuller use for these lands, let me describe our native forest. Three tree species should

be considered: sandalwood, koa, and ohia.

Sandalwood grows in one corner of the forest, barely hanging onto life. However, from 1790 to 1830, sandalwood was the most important of island woods. Selling at \$5.00 a cubic foot, this scented wood brought the Hawaiian kings over four million dollars. In 1840, the sandalwood was gone. Today, sandalwood is quite common, but it is scattered and generally so small in size that it is not economic to log. And we do not have the time to search for the answers to the development of a sandalwood industry. We know nothing of the

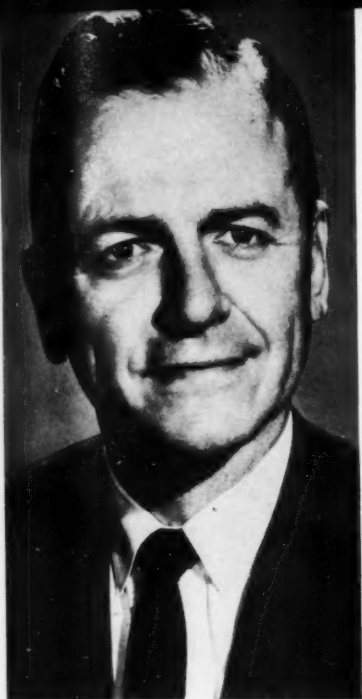
(Turn to page 53)

Hawaiians use D8's and TD24's to clear the dense Honaunau forest. Although it appears to be a rather sloppy clearing operation it is adequate for the fast-growing ash and cedar seedlings.



What Kind of a Park?

Witnesses at the recent hearings on the proposed Cape Cod National Seashore generally did not dispute the idea that a seashore should be established but rather what type of area would be developed



Senator Frank E. Moss of Utah

AUTHORS of any bill seeking to incorporate six towns into a federal park type installation—and Down East Yankee towns at that—can anticipate a certain amount of salty comment from the areas most concerned before the dust settles. This is certainly true in the case of six communities in the Cape Cod section of Massachusetts where the commonwealth itself is pressing for a 30,000-acre Cape Cod National Seashore to halt a growing floodtide of building, both desirable and otherwise, in what is unquestionably one of the most picturesque seashore areas in the nation.

Most of the native-born people on Cape Cod are friendly, self-reliant, and highly individualistic. In summer months the population of the area swells by as much as two or three times. The Cape Codders are partial to well-ordered families from all over the country who go there to vacation, fall in love with the place, build, and eventually retire there. They are inclined to be caustic about the tenting fraternity—or as the Cape Codders say, the people “who come here with one shirt and a five dollar bill and don’t change either.”

Local governmental affairs in Cape communities are resolved in that unique New England institution known as the “town meeting.” Everyone has his say at these meetings, and woe to any too-aggressive individual who tries to dictate to the meeting. As a Truro selectman commented recently, “You don’t tell 400

or 500 people that they have to do anything and get away with it too often.”

It is not surprising, therefore, that when Conrad L. Wirth, director of the National Park Service, went up there last year to tell the Cape Codders why they needed a national seashore he encountered stormy weather. Whether they were for the park or not, and many of them are, they would have still given Mr. Wirth a rough time. It was the principle of the thing.

Some people wondered if Senator Frank E. Moss of Utah, chairman of the Subcommittee on Public Lands, wouldn’t be obliged to undergo the same ordeal when he took his committee to Eastham late last year to give the Cape Codders an opportunity to be heard on S. 2636, the seashore bill introduced by Senators Kennedy and Saltonstall and Representative Hastings Keith. But Senator Moss fared very well. He ran a tight two-day fact-finding session, suffered the more long-winded witnesses with patience, squelched all expressions of emotionalism, and had the satisfaction of knowing he was “in” the last day when a Mrs. Winslow, of Truro, presented him with a jar of jelly.

Not that there wasn’t plenty of blistering testimony at this hearing. Mrs. Walter P. Chrysler, Jr., of Provincetown, termed the bill “tyrannical destruction of the inalienable right of citizens to own, improve, dispose of, bequeath, or will private property.” There was plenty more of the same. But taking the testimony as a whole, one’s belief grows that a national seashore park *will* be established on the Cape and that such establishment actually isn’t the

real issue any more. The issue with Cape Codders, on the basis of the testimony, is *how much* land for a park and *what kind* of a park?

Much of the credit for the relatively reasonable approach at the Eastham meeting must go to Senators Saltonstall and Kennedy and Representative Keith. There were few witnesses at Eastham who did not concur that their bill represented a real effort to meet the rather unique needs of the area in a highly unique manner and that it represents a vast improvement over all previous bills in most respects.

As reported in *AMERICAN FORESTS* in October, 1959, the bill proposes a new type of recreational seashore park for *use*, rather than *preservation* . . . and this, it might be added, is something entirely new in recreation—development and largely divorced from the national park concept.

But should it be divorced? That is the question raised at Eastham by former Attorney General Francis Biddle, of Wellfleet, and a number of other Cape Codders. In addressing their comments to Chairman Moss, people of this persuasion said that unlike the tremendously large western parks, the Cape Cod area is a “miniature landscape” and that they are fearful that encouragement of all types of outdoor recreation in a region in close proximity to 50 million people would literally engulf the region with swarms of humanity and wind up by destroying the very charm and values residents hope to preserve.

The question is not whether to have a park, but what *kind* of a park to have. Mr. Biddle stressed again
(Turn to page 42)

WHEN I was walking over my farm four years ago, I found a scrawny peach tree growing under a forest of tall trees. As I looked around, I saw other dwarfed peach tree seedlings under the tall timber. Then I got the idea of gathering these wild young trees for an orchard. I already had a place where I would set the trees—my orchard would be on the steep bluff above our front yard where I could watch over it. The ground wasn't exactly suited to fruit trees, but it had a better soil than where I had found them growing. A portion of the bluff was on the north hill slope, but I had to keep the steep slope mowed since it was too close to the house.

I counted near-about 25 wild seedlings, which I took up with the sharp end of a stick. I brought these home to set on the bluff where I had dreamed of having my peach orchard. Here I went to work with my mattock, on ground too steep to plow. I dug rows of holes around this bluff, and at each hole I mulched the dirt until it was as fine as sand. Here, I watered each tree before I set it in its carefully prepared seedbed. I wanted to be sure each tree would grow, for I believed in my dream.

Since these 25 trees were not enough to set my orchard, I thought about going to the places where houses had stood a century ago. Here I could search for more peach tree seedlings. I wanted to see what kind of peaches our pioneers had grown.

First I went to where the old Hilton house was burned in a forest fire a half-century ago. Uglybird Skinner, whom I had known since I could remember, told me about this orchard where he had picked peaches when he was a boy. He had been dead ten years and was 80 when he died. Once when we walked over this land together shortly before his death, he told me about this orchard that grew fine peaches.

Whether or not these trees would grow superior peaches, the young seedlings that had endured in the forest so long were trees that had a will to survive. Succeeding generations of these trees had endured over a century. They had outlasted freeze, forest fires, and a smothering wilderness that had grown up over them. I thought this must be a rugged species of peach. My thinking that there might be more than one kind of peach among these seedlings also

made it interesting. Someday, after these trees reached maturity and bore fruit, I would know. I would have to live in suspense while my orchard was growing.

When I found six trees growing in the wilderness around the old Hilton house, ones that had survived from root and seed in a wilderness, I was very happy. But there was another place on the farm on Seaton Ridge called Six Hickories where there used to be several dwelling houses and an old hotel. I had seen peach trees growing wild under the tall oaks and pines near their fieldstone foundations. Old Uglybird had once told me of a big orchard near here. So I went to this spot and started my search.

dream orchard

By JESSE STUART

I looked everywhere over this area. I searched among the brier thickets, under the tall yellow pines whose needle fingers clawed at the bright winds up near the white clouds. I found only eight young trees. And I wondered if two of these would live, since I had broken their roots when I took them from the ground. As I dug I wondered, too, about the gnarled hands of yesteryear that set a peach orchard up close to the white clouds instead of in the fertile valley below! I thought they had to be durable trees to survive this long in the wilderness. So I took these eight down to the bluff where I set them carefully close to my kitchen window so I could watch them.

There had been another old log house on this farm. I could remem-

ber it standing when I was a child. The house was burned to the ground in one of the most disastrous forest fires we had ever had here. Fire had raced over the land with flames leaping as high as low hills, burning the house, barn, and all the outbuildings. It left the land a charred-black ruin. This fire swept everything before it, but it didn't kill the roots of the peach seedlings. And it didn't kill peach seeds under the last year's leaves. They survived as they had done for perhaps more than a century. Here, after a thorough search, I found seven little seedlings.

Beside the creek, near the old log barn on the Win Daughtery place, I found several young peach trees under a tree not much higher than my



The author searched through many orchards to find his special peaches.

Blossoms clustered on the boughs reflect bright sun of spring.

head. I removed all these young trees, brought them to the bluff, and set them. They had grown up from the seeds to a height of six or eight inches. To these trees I added a young tree here and there that I found beside the creek, along the road, that had grown from a peach seed someone had thrown down. The more varied the trees I found to set in my orchard, the greater my suspense would be.

The Buzzard Roost country was not on my land. It was three miles

d.
d
st
re
es
g
t
l.
y-
e
it
e
as
n
ch
s.
g
I
o-
ay

or-
es.

ord
of sp

ng
nd
om
ht
a
I
he
ch
he
set
us-

ras
les

TS



and more from where I lived. Forty years ago, when I was nine, I worked in the peach orchard. Win Daughtery had set the slope in strawberries where he had done some long-range planning of his own. He also set the strawberry field in peach trees, so that when his strawberries ceased production he would have a young orchard ready to bear fruit.

The kind of peach he grew here was called the Daughtery Peach. It was the only one I knew about then that would reproduce its own kind from the seed.

When Win Daughtery sold his peaches he requested that all the seeds be returned to him. He sold the peaches, too—wonderful, not-too-large, delicious, very fuzzy, pink-

cheeked peaches—to people who were not interested in growing peaches commercially. He didn't want everybody to have such a fine peach for which there was always a ready market. He hauled these peaches to Ohio in his express wagon in those days, where he sold them to the city people. He knew they didn't dream about a freestone peach that reproduced itself from the seed. He was careful not to let anybody get this peach. In fact, no one around here had had the peach in his lifetime.

Win Daughtery had been in his grave for 28 years. But I hadn't forgotten about the Daughtery Peaches and the old orchard where they used to grow. I knew no one in this coun-

try knew of this peach, so I wondered if I could find some trees growing wild that came from his trees. My orchard wasn't complete until I had found the Daughtery Peach.

One morning I set out and walked the three miles to find where the strawberry patch and orchard used to be. I found the place, finally, a flat hilltop where there was a grove of white poplars big enough for sawtimber. There I began my search for the Daughtery Peach.

By middle afternoon I had found six small ones. I was delighted to find those six, even if one was just up from the seed, not more than three inches high. I brought them home and set them out. Three of the six died, but the one that was just up from seed grew like a stalk of corn. I had finished setting my orchard except that I didn't have trees to replace the ones I lost. I had almost an acre in my young dream orchard.

After I was through setting the trees, I kept the grass cut and hoed the small young trees like corn. I could not plow between the trees because the ground was too steep. Then I wondered, too, if over-cultivation of these trees would be the thing to do. These were wild trees, just out of the forest where they had survived in a wilderness where strong trees choked out the weaker ones. Nature's plan was the survival of the fittest and the elimination of the weakest. What would over-cultivation do to these survivors?

What kind of fruit will my trees bear someday, I wondered as I worked among them. I wondered if the trees I had found at each old house would bear the same kind of fruit and if the three trees that I found in the Buzzard Roost country were the Daughtery Peach. If they were, I would get seed enough when they bore fruit to plant an orchard of them.

Since I didn't know what kind of fruit they would bear, I lived in expectancy. The second year, several of the larger ones had a few blooms. Then, the third year, there were more blooms. I had hopes of finding out what kind of peaches the pioneers brought with them a century and a half ago. But a white frost covered the orchard one night. Water froze in the creek. I knew any thoughts I had of knowing the kind of fruit my trees would bear would have to wait another year.

Last spring was the fourth birth-date of my Dream Orchard. Each
(Turn to page 46)

Man With a Cause



Sen. Neuberger

Senator Richard L. Neuberger, of Oregon, who died last month at 47 after a serious cancer operation, was no stranger to the pages of *AMERICAN FORESTS*. His writings in the magazine in years past won him many friends. He won many more in recent years when he championed the cause of the Klamath Indians of his native state and their resources. His article, "Solving the Stubborn Klamath Dilemma," in April, 1958, was very favorably received by readers of the magazine.

The entry of Senator Neuberger into politics some years ago, after a highly successful career as an author and journalist, took many conservationists by surprise. At the same time they agreed it was typical of him. Like the late Bernard DeVoto and Heywood Broun, he enjoyed championing causes, especially conservation causes, and he was an ardent admirer of the late Senator Norris. He hit the United States Senate like a breath of invigorating fresh air from the high country of his own state. Once there, many senators who had regarded his career with a certain reserve were soon captivated by the warmth of Senator Neuberger's personality, his sincerity, his honesty, and his willingness to give the "other side" every consideration.

High tributes were paid to him on March 8 by his colleagues in the "world's greatest deliberative body." The entire legislative day of March 8 was devoted to eulogizing Senator Neuberger (*Congressional Record* of March 9, 1960).

Meanwhile, Mrs. Maurine Neuberger, wife of the late Senator and his partner in his rise to the Senate, has announced that she will run for the seat vacated by her husband.

Ganges Cleanup Ahead of the Potomac?

**Veto of Blatnik Pollution Bill Scored at Wildlife Congress in Dallas.
But Administration Boost for Soil Bank Wins Warm Praise of Scientists**

THE possibility that the Ganges River in India may be cleaned up ahead of the Potomac due to U. S. generosity abroad and the conservative Administration attitude on pollution here, was raised by Dr. Ira N. Gabrielson, president of the Wildlife Management Institute, at the formal opening of the 25th North American Wildlife and Natural Resources Conference at Dallas, Texas, on March 7.

In referring to the Presidential veto of the Blatnik Bill for strengthening the Federal Water Pollution Control Act and expanding authorization for grants-in-aid for cleaning up the nation's waters, Dr. Gabrielson drew attention to the fact "that a few figures for comparative purposes might be of interest." Although the approach to federal participation in vital domestic water pollution abatement programs has been characterized by "heel-dragging and pious regard for a balanced budget, this same Administration, between 1955 and 1959, provided, through the International Co-operation Administration, outright gifts to foreign countries for sewage treatment plants and sanitary services totalling \$48.5 million," he told the conference.

Support for Dr. Gabrielson's position on the Blatnik Bill veto was voiced at Dallas by Governor Robert B. Meyner, of New Jersey. In praising the "good record" of the U. S. Public Health Service, Governor Meyner said, "It seems inconceivable to me that the national administration has seen fit to veto the amended water pollution bill, which would have made available \$90,000,000 annually for municipal treatment plants. Population and industrial growth are often so rapid that local financing cannot hope to cope with the pollution load. Every American living and yet unborn has a

stake in clean water everywhere on the continent."

In an address that was sharply critical of the Administration's pollution policies, Dr. Gabrielson said, "... Since Congress reconvened in January, the bill (Blatnik) was cleared overwhelmingly by both houses. The Presidential veto, which Congress failed to override, clearly shows that clean water for industry, public welfare, and national security is of less importance to the present Administration than to those elements of the economy that comprehend the seriousness of the problem. The chief opponents of legislation for cleaner waters have been the Chamber of Commerce of the United States and the National Association of Manufacturers. Apparently, their influence is more potent with the Administration than that of the millions of Americans who must continue to tolerate polluted waters because of a penny-wise, pound-foolish budget economy."

In a rundown of the demonstrable gains that have been made in soil, water, forest, fish and wildlife, and recreation, Governor Meyner said that the public lands now assume importance for recreation "... but as government leaders we will have to curb the parochial enthusiasm of professional foresters, wildlife managers, and water engineers alike, so that multiple use management best serves the broad public interest. Again, business and industry will reap both direct and indirect benefits from intelligent conservation."

Governor Meyner also stressed that conservation must approach the resource of air and the atmosphere around us. Smog blights of killing intensity, Strontium 90, planes of extraordinary speed—all these point to the fact that safeguards must be adopted. At the same time, we must search for and adopt a world nuclear

policy that will insure 2.8 billion world citizens an atmosphere which will allow normal living and the perpetuation of the species, he said.

The need for striking a "sensible balance" between meeting the needs of diverse economic interests and the needs of people as human beings—individuals with a right to air, space, beauty, and quiet—was also emphasized by the governor.

"It is easy to be fat and comfortable, and to ignore the problems of the day," Gov. Meyner said. "How significant it is that we are concerned with the height of the tailfins on our cars, but not about the rate at which we destroy our heritage. How expressive it is that we are status seekers in dress, housing, and transportation, and turn our backs on natural resources!"

In leveling criticism at the Administration's pollution policies, Dr. Gabrielson said it simply isn't true that municipalities lie down on the job when the "feds" step in. "A point of interest is the degree of local participation in the over-all national program," he said. "Federal grants to the states to date total \$131.6 million, while the communities and states have contributed \$553.6 million. This program has stimulated four dollars in local participation for every dollar in federal assistance. Few other federal grant programs can boast such a degree of local financial support as the pollution control program. The federal highway program, for example, offers nine dollars in federal aid for each dollar of state participation."

Dr. Gabrielson also expressed regret over the failure of the Administration to boost this year's appropriation for pesticide research although there is a possibility the Congress might increase it following conservationist pleas. On the other hand, many conservationists were heart-

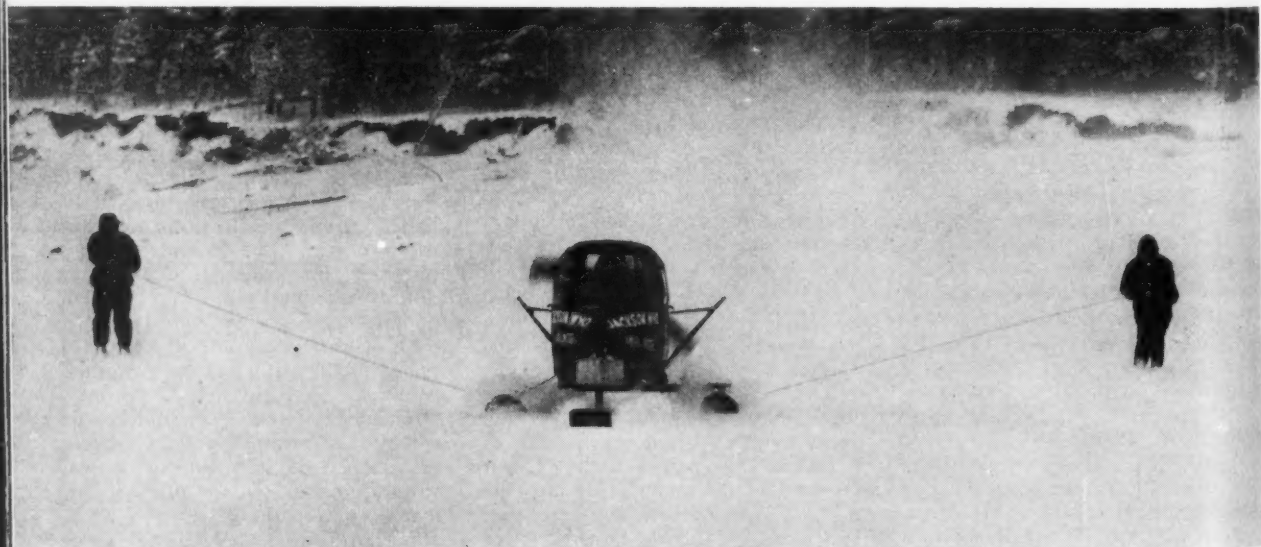
(Turn to page 52)

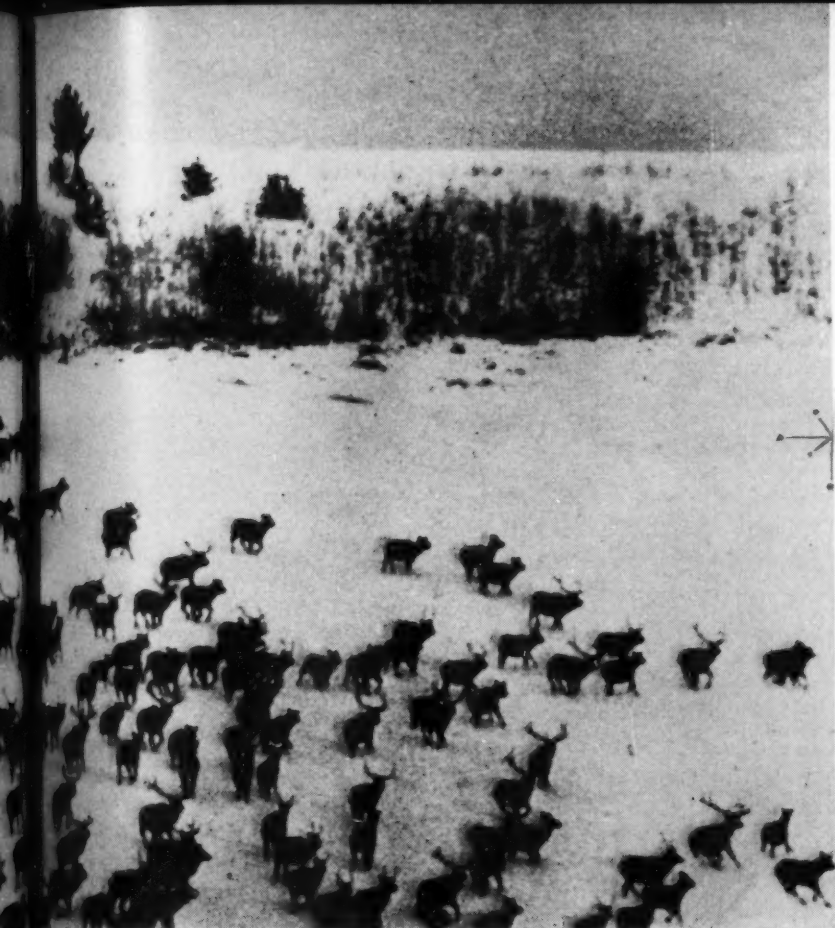


Photographs by Wide World Photos

WINTERTIME

Towed by snowplane, powered by a 65 horsepower aircraft engine, two skiers zip over snow of Jackson Lake in zero weather.





Elk at Jackson Hole leave snow-covered summer feeding grounds and move to National Elk Refuge

USA

THE unusually heavy snow that blanketed many parts of the country this winter created picturesque and unusual scenes, such as these caught by the camera at Jackson Hole, Wyoming.

Perhaps the most interesting is the photograph of elk on the move. Driven from their summer feeding grounds by the snow, some of the more than 14,000 elk in the Jackson Hole country moved down to the huge National Elk Refuge for a government "handout." Before the ref-

uge was established in 1914, the elk died by the thousands.

Another interesting sight in this snow-covered area is skiers towed by snowplanes. This sport is only for the very hardy. Without its burdens, a snowplane can travel at speed up to 125 miles an hour.

The snow also created a wonderland of white at the village of Colter Bay on Jackson lake. The village is named for pioneer trapper-explorer John Colter, a member of the Lewis-Clark expedition.

Lone man snowshoes down street of village for summer tourists at Colter Bay





Norridgewock Bridge, which unfortunately no longer exists, had unique combination of laminated arches and Town lattice trusses

COVERED BRIDGES: *Link*

WHEN the 126-year-old South Perkasio covered bridge in Bucks County, Pennsylvania, was scheduled to be replaced by a modern structure not long ago, there was considerable fear that this fine old relic would be destroyed. But Andrew Schuler, head of the local historical society, went to work. He wrote letters, talked to individual persons and groups, and entreated with the bridge contractor. He finally raised about \$4,000, and for this amount the contractor agreed to move the old bridge to a new site about a mile away. Fortunately, the bridge was of lattice construction and was rigid. It could be moved without too much trouble on fork-lift trucks and is now safely installed in a public park.

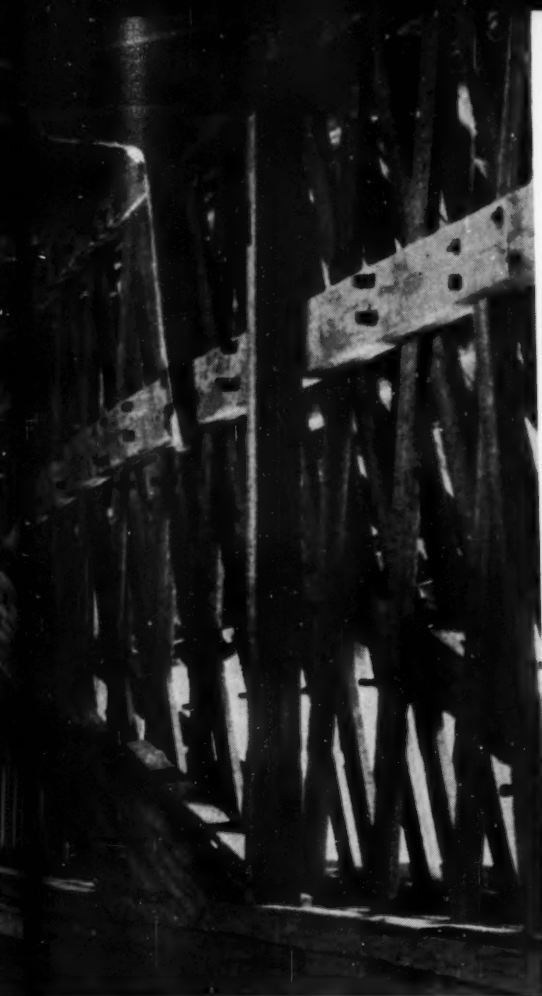
All covered bridges do not fare so

well. They are particularly susceptible to fire, and it is not unusual for one to be burned by someone who takes this means of making sure that a more modern bridge will be built. And then there is also normal loss, such as almost occurred in the case of the South Perkasio bridge. Highway departments, tired of the continual need for repairs, tear down old wooden bridges and replace them with new concrete or steel structures.

But there were at one time many covered bridges in the United States and Canada, and many still remain. One would think that most of them are in New England. New England cherishes old things and holds on to them; it also advertises its antiquities. The covered bridge is almost synonymous with New England.

The state which has the most covered bridges, however, is Pennsylvania with 345, followed by Ohio with 270, Indiana with 170, and Oregon with 160. Even the Canadian provinces of Quebec with 250 covered bridges and New Brunswick with 225 have about as many each as all of New England, which has a total of 240. It must be said, though, that New England's bridges are especially well cared for, and they do fit into the scheme of things. They seem to belong.

The question is often asked, even by some of my better-informed friends: "Why were bridges covered?" You can find a lot of answers, most of them incorrect. They were not covered to protect the traveler, his horse, or his load of hay from the weather, although they often served



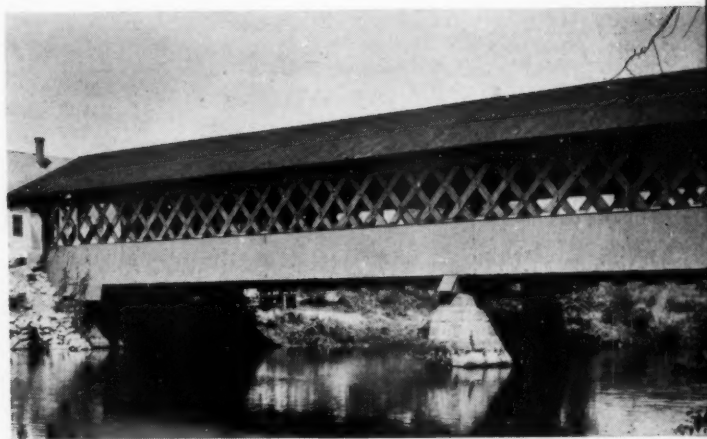
with the past

as handy havens from a storm. Neither were they covered to prevent a horse from shying at the sight of the moving water—blindings served that purpose. And, of course, they were not intended primarily as romantic spots in which to pause while coming home from a church social, although, here again, they certainly had their merits. The very practical fact is that bridges were covered for the protection of the bridges themselves.

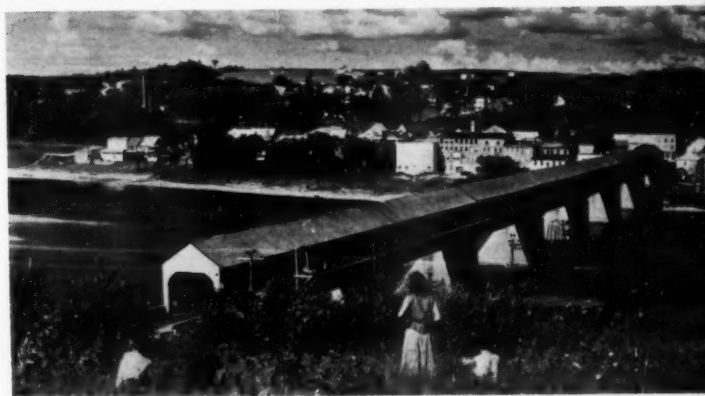
Bridge builders knew that moisture, or, more accurately, alternating wet and dry, soon destroys wood. For the plank floor of a bridge to deteriorate was not so bad, but the main structural timbers were different. These were large and heavy; they were expensive and difficult to

(Turn to page 48)

By JOHN T. STARR



West Swanzey bridge across Ashuelot River, N. H., was built in 1832



Longest covered bridge in the world crosses St. John River at Hartland

Four-span bridge on the Ammonoosuc River is of Burr truss construction





Mardi Gras Ball in Washington, D. C., sponsored by Louisiana State Society, was as spectacular as its New Orleans counterpart.



THE JOLLY MONARCH

Last month was Mardi Gras time again in the nation's capital, and this year's gala ball found the Louisiana State Society of Washington saluting the paper industry of Louisiana, employers of over 23,500 people and the fourth ranking Louisiana manufacturer. King of the event was Vertrees Young, regional vice president of The American Forestry Association, former president of the Louisiana Forestry Association, and a director and consultant of the Gaylord branch of the Crown-Zellerbach Corporation at Bogalusa. As former director of the Bogalusa program, Mr. Young had charge of the famous Gaylord planta-

tions (upper right) which will be visited by AFA members at the 85th Annual Meeting of the association October 17-19 at Edgewater Gulf Hotel, Edgewater Park, Mississippi. Keynoter for the convention will be Senator Stennis, of Mississippi. Located on the Gulf of Mexico, the Edgewater Gulf Hotel is situated midway between Gulfport and Biloxi. It has 700 acres of landscaped grounds providing a wide array of recreational opportunities. Both the field trips on the famous Gulf Coast and the program proper promise to be one of the most widely-attended and constructive affairs in the history of the association.



Miss Corinne Boggs, Queen of Mardi Gras, is daughter of Congressman Hale Boggs. Vertrees Young served as king for magnificent event



Mr. Young was formerly in charge of the famous Gaylord plantation

Congressman Hale Boggs of Louisiana, front row, left, welcomed members of the Mardi Gras court to the Capitol building in Washington



ing Vertrees Young

TO the American public, the forester for many years has been the man of good works who fought forest fires, planted trees, chased predators out of the forest, and bound up the singed paw of a bear cub when it was injured in a fire. This ranger won the affection of the public as have few individuals in modern times. To the public, he was and is a knight in shining armor.

To these ingredients something new has been added in recent times, and the public has not yet completely accepted it. The advent of industrial forestry and greatly-increased timber production on public lands has made the public aware that foresters also cut one whale of a lot of trees. To generations brought up on Arbor Day ceremonies at which "Woodsmen, Spare That Tree" was the major recitation of the day, this new version of their beloved ranger has proven to be something of a jolt. This has given rise to speculation as to whether recreational and wildlife activities on public lands shouldn't be turned over to managerial agencies solely concerned with those matters. Some groups with extreme views on the subject refer to all foresters indiscriminately as "sawlog foresters," meaning that foresters have no real interest in anything except the production of sawlogs, which charge is seldom if ever true. Practically all lines of conservation endeavor can point to foresters who were key leaders in at least the initial stages of their programs.

The foresters are reacting to these criticisms that they are "narrow-minded" in the best possible and only way open to them, by engaging in some good old-fashioned "soul-searching." This became very evident at the second annual winter meeting of the Washington section of the Society of American Foresters on March 17. Hitching their star to the multiple use management concept, the foresters indicated that in view of mounting population pressures multiple use must be the only answer to the management function and that these pressures will demand that all lands be used for more than one exclusive or limited function.

What is multiple use? Dr. S. T. Dana, who was introduced as the "Dean of American Forestry," defined it as the management of all the resources of a given property so as to give maximum satisfaction to the owner. Multiple use is a planning concept and an operating benefit, he said. It takes all the resources into consideration but doesn't necessarily employ them all.

"I do feel that up to now we have over-emphasized incompatibility of use more than necessary," Dean Dana said. "I believe the average hunter gets more

satisfaction out of using a well-managed forest and that the same is true of campers. The job of multiple use is to minimize incompatibility in so far as possible. And the goal of multiple use must always be to obtain maximum satisfaction for the owner in terms of social, personal and monetary returns."

Are foresters incapable of practicing multiple use? That was the question raised by one forester from the floor. Dr. Marion Clawson of Resources for the Future, a non-forester and also a sensible man, ducked this question. But Dr. Dana answered it, giving the questioner a qualified yes.

"Peopleitis"

Diagnosed by Foresters

There has possibly been too much emphasis, increasingly, on the production of trees for sawlogs and other wood uses, Dr. Dana replied. At least the public feels this way about it. In short, the public today does not have full confidence in the forester—does not feel that he is equally interested in *all* uses of the land. In the past, our forestry schools have emphasized wood production in their curriculums, and as a result the forester has lost the confidence of the public in some respects. The public, he said, is asking to be shown that the forester is equally interested in *all* uses of the forest.

Chairman Maurice K. Goddard, Secretary of Forests and Waters of the Commonwealth of Pennsylvania, added at this point that, on the other side of the coin, until comparatively recent times timber and water were almost the *only* values on forest lands. "Foresters will adjust to new demands as they become economically feasible and necessary," he predicted.

In a good-humored address that went far in dispelling the notion in the East that many western industry people are "anti-wilderness," H. R. Glascock, Jr., Forest Counsel, Western Forestry and Conservation Association, gave a doc-

tor's diagnosis and prescription for present land ills and found that forests are suffering from "chronic peopleitis." The day before at a House hearing on the Multiple Use-Sustained Yield Bill he had recommended that "wilderness" be added to the list of uses recognized by this bill.

In view of a rapidly-increasing population, he questioned whether the philosophy of primary—or totality of land use—would work in the long run since it tends to minimize the compatibility of uses and maximizes a dominant or primary use for each land unit. This would result in "our forestland base being broken up into units each being managed essentially for an exclusive use."

In sharp contrast to this concept, the multiple use treatment of land maximizes the compatibility of forestland uses, he said, and added that the criterion to govern the management of each unit of land must always be: which use or combination of uses under what management practices will produce the greatest continuous sum of benefits for the owners?

Mr. Glascock said, "It seems logical then that full, integrated, and conditioned use—or multiple use—is not merely the preferred treatment but the *only* treatment which offers hope of permitting our forestland base to serve well the needs of people through maximum benefits. It has been well-said by J. H. Berryman, of the Minnesota Bureau of Sport Fisheries and Wildlife that 'no single resource use can exist today as a separate function of resource management.' There simply is not enough land to divide up and manage more and more parcels, units, or vast areas for limited or exclusive use. . ."

Dr. Clawson said he doubted that the future will see great shifts between uses or that much more land will be set aside for specific uses such as recreation, but he predicted that we will see tremendous changes *within* each use. Interrelation of uses is where multiple use will have its greatest tactical application, he said. Multiple use can produce *one* answer to the problems that exist today but not necessarily the *only* answer, he added. One point on which he felt strongly was that recreational users of public and private land should be made to pay for their use of these lands. Every member of the panel shared this conviction, it was learned.

Dr. Richard E. McArdle, Chief of the Forest Service, on behalf of the Mexican government, conferred Mexico's highest award on Tom Gill of the Pack Forestry Foundation, for his service to tropical forestry and Mexican resource development and management.

Multiple Use Gets Confidence Vote

PROPOSALS in H.R. 10465 and 50 related bills introduced in the House to establish legislative authority to administer the national forests under the principles of multiple use and sustained yield management last month received almost unanimous support from some 40 Congressmen and representatives of various conservation and trade associations at hearings before the Subcommittee on Forests of the House Committee on Agriculture.

Emphasizing that the forests have been managed for many years under the dual conservation policies of multiple use and sustained yield, Forest Service Chief McArdle told the committee that there is no question as to the Agriculture Department's authority to so manage the national forests and that the recommendations that this bill be enacted should not be so construed.

Why then is the bill needed, Dr. McArdle asked. The department believes there are four basic reasons: 1) There should be a statutory directive to administer the national forests under sustained yields; 2) "there should be a statutory directive to administer the national forests for multiple use; 3) all the renewable surface resources for which the national forests are established and shall be administered should be named in a single statute; and 4) enactment would help to implement the "Program for the National Forests" sent to the Congress a year ago.

Since the introduction of the bills, inquiries have been received on two points, Chief McArdle said. The first point relates to the order in which the resources are listed (outdoor recreation, range, timber, watershed, and wildlife and fish purposes). As explained in the acting secretary's letter of transmittal of February 5, the resources were listed alphabetically, and such listing has no significance insofar as the relative priority of one resource to another, he said. One of the basic concepts of multiple use is that the five resources in general are entitled to equal consideration, but in particular or localized areas the relative values of the various resources will be recognized.

"This is a fundamental point," Chief McArdle said. "We in the Department of Agriculture do not care in what order the various resources are listed, provided it is made abundantly clear either in the statute itself or in the legislative history that the resources will be given

equal consideration in general and over the national forest system as a whole. If one resource, or two resources, are given priority over the other resources by statute, this strikes at the heart of the multiple use concept and would be unacceptable to us. It would make impossible the continued management of the national forests for 'the greatest good of the greatest number in the long run.' "

A second and closely related point is whether the bill would change the historic role of the various renewable resources in national forest management, Chief McArdle said. "There are those who assert that the naming of timber and water in the act of June 4, 1897, gives these two resources statutory priority in national forest management over the other renewable resources of the national forests. With this we disagree."

Chief McArdle said the statutory base for management of the various resources . . . the regulations of the Secretary of Agriculture, court decisions (decisions on occupancy and use as applied to grazing and wildlife uses) appropriation actions of Congress, and the long history of Forest Service management for over 50 years combine to make it abundantly clear that no one resource, or two resources, consistently have priority over the others.

"Thus, the recognition of these several renewable resources as of equal priority under the multiple use concept is not changed in the historic pattern of national forest management," McArdle said. "It is instead a reaffirmation and recognition by Congress of what is already soundly based and long practiced. This legislation would neither downgrade nor upgrade any single resource."

Support for the bill has snowballed rapidly. In announcing the support of The American Forestry Association, Chief Forester Kenneth B. Pomeroy stated that "this endorsement is given with the understanding that future management shall continue to be in accordance with the principle laid down in the historic directive 'the greatest good for the greatest number in the long run.' "

The American National Cattlemen's Association, representative of 800 local and regional livestock associations, endorsed the bill without reservation and publicly commended the Forest Service for its wise administration in

the face of past adversities. Mr. Horrell, speaking for ANCA, asked specifically that all uses receive equal consideration, subject, of course, to the limitations of specific areas.

The National Reclamation Association, while commending the Forest Service for the excellence of past administration and supporting the multiple use concept without reservation, also pointed out that water is the primary and most critical need in many western areas. Therefore, it should be given first priority, the association said.

What was the position of the wood-using industries? A review of the testimony showed one pattern has developed in that the American Pulpwood Association, the Western Forestry and Conservation Association, and the National Lumber Manufacturers Association all made it abundantly clear that safeguards should be provided to make sure that nothing in the bill should be construed as affecting the basic policy for establishment of the national forests as set forth in the act of June 4, 1897. To them, the key statement in the act is that "no public forest reservation shall be established, except to improve and protect the forest within the reservation, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States."

In general, it is believed that the statements of the APA and the Western Forestry and Conservation Association were mainly in accord with the bill, with the latter group proposing that "wilderness" be added to the list of uses embraced by the bill. (The National Wildlife Federation also asked that "wilderness" be added to the list.)

The lumber statement was more difficult to evaluate. Whether National Lumber was for or against the principles embraced by the bill became more uncertain with publication of NLMA's "letter" on March 18 which stated that forest products industries were "startled" by Chief McArdle's statement "that outdoor recreation, range, fish and wildlife uses should be given equal priority with water and timber in management of the national forests." This comment was tied to McArdle's remark that the Forest Service disagreed that timber and water have such priority under the organic act.

(Turn to page 67)

On the Consolidation of Resource Departments

SCARCELY does a year go by without a major reorganization of one or more of the natural resources agencies in the United States. In alternate years when most of the state general assemblies are in session, the tempo of reorganization increases. Acceleration occurs in the year of new presidential terms and reaches a peak when there is a major shift in political parties across the land. A few of these reorganizations may be motivated by purely political objectives, but most of them, I believe, are designed to provide better resource management in response to need and public demand.

Such reorganizations seem to be more prevalent in the mid-west and western states, where critical resource problems are becoming increasingly apparent with growth in population, and where resource agencies do not enjoy the long stable history characteristic of their counterparts in the eastern states. They are, nonetheless, appearing here in the East as established agencies are being called upon to assume new responsibilities and as new bureaus, divisions, councils, commissions, and other organizations are being created to provide services not formerly considered necessary. Agencies of state governments concerned with soil and water resources are, for example, largely phenomena of the past two decades.

It is to be expected under these circumstances that alert citizens and students of government would become concerned with the multitude of resource agencies which have been created. It is equally understandable that those directly connected with these agencies, the employees, their advisory councils, and their constituents, are also concerned. A frequently proposed governmental institution designed to meet this problem is a unified conservation department.

Objective consideration of the

By **CHARLES A. DAMBACH**

*Director, Natural Resources Institute
The Ohio State University*

merits of any particular form of organization is especially difficult for those directly affected. It is difficult, too, for those not so directly concerned because of the great range of interest involved in natural resources agencies. However, as an outsider, I may be able to look at the problem in a more abstract way, but not without bias conditioned by my own knowledge, sentiments, and experience.

This experience, beginning with the Soil Erosion Service in the U. S. Department of Interior in 1934, is in itself a record of resource agency change. This was the time, many of you recall, that alphabet agencies sprouted overnight in Washington like spring morels in a New England orchard after a warm April rain. There followed the transfer of this agency to the Department of Agriculture when it became the Soil Conservation Service, its growth from a demonstration to a service organization, its struggle for a place in the sun with the Agricultural Extension Service, and its near-eclipse by the Agricultural Adjustment Administration. I experienced the establishment of regional offices and the adoption of two orphaned agencies (the land use projects of the former Resettlement Administration and the CCC drainage program of the former Bureau of Agricultural Engineering), and also enjoyed the thrilling experience of watching an idea, that of locally organized soil conservation districts, emerge and blossom into a vigorous program. Finally, I witnessed sorrowfully the almost fatal dismemberment of this agency which came about with the last change in political party at the national level. All of this, it should

be noted, took place in the space of less than two decades.

My experience with a state resource agency is probably of more direct interest. Although Ohio did not have its first resource agency until many years after the first such agency was established in the East, its sequential history has been about the same. By 1900, Ohio had a geological survey, a division of forestry, and a fish and game commission whose enforcement officers were, by law, members of the political party polling the most votes in the previous gubernatorial election. Nearly 50 years later in 1949, there were four state agencies in as many departments concerned with parks—a division of forestry in the Agricultural Experiment Station, a division of water under an independent water resources board, a division of beach erosion and geological survey in the Department of Public Works, a division of reclamation in the Department of Agriculture and a Division of Conservation and Natural Resources in the same department. The latter division was in reality a division of fish and game operating under license fees and federal aid funds with an inadequately financed inland parks section attached to it.

The Ohio General Assembly considered bills to bring these divisions together under one administration in 1945, 1947, and 1949. In the latter year, legislation was enacted to create a unified Department of Natural Resources with divisions of forestry, parks, geological survey, shore erosion, water, wildlife, and a new division of lands and soils. At the time of the consolidation, the Division of Wildlife had a larger budget and staff than all of her new sisters combined. There was also little doubt that some proponents of the reorganization were more interested in getting at these funds for

(Turn to page 60)

GREATER

LIFT

REACH

STRENGTH

MANEUVERABILITY

PROFIT



with the modern, rugged EIMCO !



**SPECIALIZED CRAWLER EQUIPMENT
FOR EVERY LOGGING OPERATION
... FROM**

EIMCO®

When the going's roughest . . . the Eimco shines! Here's one of the Eimco 105 **Bulldozers**, featuring a Cummins Diesel engine, working at 11,500 feet elevation in Colorado on a road widening and relocation project. Grades ran from 15° to 45° and it was snowing . . . but the modern, tough Eimco handled the job with speed, ease and economy.

Where working performance counts

. . . The 100 horsepower Eimco 143 or the (pictured) 205 horsepower Eimco 146 **Log Loaders** will outlift, outproduce, outlast any machine in their class . . . and many larger, far more expensive, loaders. The reasons are in the quality engineering and careful custom-built construction, which has made Eimco famous throughout the world. Eimco features are working features. They'll save you time, maintenance and real money on your show, as they have for leading loggers in every domestic and Canadian logging area. You owe it to yourself to get all the facts and figures on the great Eimco Log Loaders before you decide on any loading program or procedure!

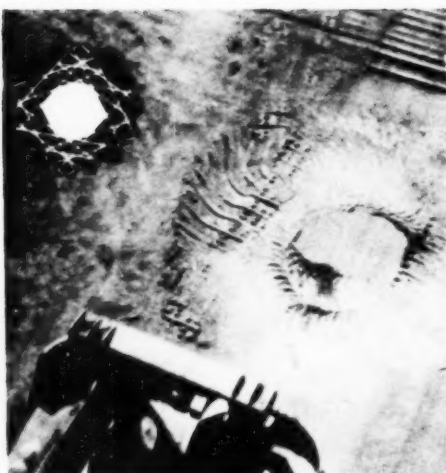
For dependability on any show

. . . The powerful Eimco 106, featuring a Detroit Diesel GM V-6 engine of latest, modern design, developing 205 working horsepower, in a **hydraulic dozer**, working on road pioneering in western Idaho. Famous Eimco maneuverability is due to a series of balanced engineering advances that include Eimco's famous "Unidrive" transmission, with gears that never reverse rotation regardless of the direction of tractor travel; Dual Final Drives, that permit individual track operation, either forward or reverse or both in the same direction; and single stage heavy industrial torque converter . . . all as standard equipment at no extra cost to you.

Sheer power and precision control

. . . An Eimco 146 **Log Loader** at work in California, shows one of the many practical Eimco features. Fork clamps are equalized, for ease in handling irregularly shaped logs. They will pick up logs vertically, lift and place on high or low stacks. Both clamps release together instantaneously. No chance for log hang-up or dangerous dropping of one end only, because one clamp lags behind the other, with an Eimco! Up-front operator position makes control easy . . . affords control-tower visibility.





The modern tractor for greater work-ability

... No picture can do full justice to the wonderful feeling of REAL visibility and control that Eimco's exclusive up-front operator position affords ... but this ground-view shot can give you some idea. Instead of craning and straining, the operator sits in passenger-car comfort, easily looking at and over his blade, work and course. Seat has sixteen adjustments, including one for weight and back-angle, is torsion bar sprung for real shock-absorbing comfort, armchair safety.

Unexcelled stability and maneuverability

... Eimco's flexible, strong power-team, allows true spin turns in either direction, by the flip of the levers ... and at any engine speed or tractor load, forward or reverse! This is true maneuverability, so essential in the woods ... and all at no extra cost! Your Eimco can negotiate slopes, either forward or reverse, with outstanding stability, as proven in Department of Forestry Tests, as well as on the job, in the most rugged areas, for real safety.

Unique in its modern design

... Eimco crawler-tractors are built by craftsmen who care! No other tractor manufacturer takes the extra steps and care to insure precision manufacture, long maintenance-free performance, that is yours with the modern Eimco line of tractors. Seventy-five years of experience in designing and building heavy industrial equipment for the toughest, hardest jobs, is behind every step of Eimco engineering and production. With the greatest number of important "firsts" in the tractor industry, Eimco guarantees every tractor unit, including transmission, for one full year, against any defect in workmanship or material!

" YOU'RE YEARS AHEAD WITH AN EIMCO "



The **Eimco Seal** is your assurance that here is a tractor, dozer, front end loader, fork lift or log loader produced to the highest standard in the industry. We invite you to compare ... specifications ... components ... workmanship ... engineering ... or on the job.

Three Great Series!

The Eimco 103
100 HP

The Eimco 105
143 HP

The Eimco 106
205 HP

For specifications, details, or the assistance of a qualified Eimco sales engineer, please contact the dealers or branch office nearest you, or write The Eimco Corporation, P. O. Box 300, Salt Lake City 10, Utah, U.S.A.

ADVANCED ENGINEERING AND QUALITY CRAFTSMANSHIP SINCE 1884"

THE EIMCO CORPORATION



TRACTOR LOADER DIVISION

684 SOUTH 4TH WEST
SALT LAKE CITY, UTAH — U.S.A.

EXPORT OFFICE: 51 - 52 SOUTH STREET, NEW YORK, N. Y.
BRANCHES AND DEALERS IN PRINCIPAL CITIES THROUGHOUT THE WORLD



HEAD OFFICE

Salt Lake City 10, Utah

DIVISIONS

Filter Division
Loader Division
Metal Division
Process Engineers Division
Research Division

RESEARCH AND DEVELOPMENT CENTER

301 So. Hicks Road
Palatine, Illinois

PROCESS ENGINEERS, INC.

420 Peninsular Avenue
San Mateo, California

EXPORT OFFICES

Eimco Building
51 - 52 South Street
New York 5, New York

BRANCH SALES OFFICES

Berkeley 1, California, 637 Cedar Street
Birmingham 9, Ala., Vestavia Hills.
Cleveland, Ohio, 1836 Euclid Ave.
Duluth, Minn., 1823 East Superior Street
El Paso, Texas, 1225 Mills Building
Houston 6, Texas, 3215 West Alabama Street
New York 5, N. Y., 51 - 52 South Street
Palatine, Ill. (Chicago), 301 So. Hicks Road
Pittsburgh 5, Pa., Box 666-A — R.D. No. 5
San Mateo, California, 420 Peninsular Ave.

AFFILIATED EIMCO COMPANIES

CANADA

Eimco Process of Canada, Ltd., 14 Raitherm Road
Toronto 19, Ontario, Canada

FRANCE

Societe Eimco, 2 Rue de Clichy 2, Paris 9e, France

ITALY

Eimco Italia, S.p.a., Via Finocchiaro Aprile 14,
Milan, Italy

NORTHERN RHODESIA

Eimco (Northern Rhodesia) Ltd., P.O. Box 885
Ndola, Northern Rhodesia

SOUTH AFRICA

Eimco Angola, P.O. Box 6047, Luanda, Angola

SOUTHERN RHODESIA

Eimco (Southern Rhodesia) (Pvt.) Ltd., P.O. Box 2863,
Salisbury, Southern Rhodesia

UNION OF SOUTH AFRICA

Eimco (South Africa) Pty., Ltd., 136 Kinson Road,
Robertsham, Johannesburg, South Africa

UNITED KINGDOM

Eimco (Great Britain) Ltd., Team Valley,
Gateshead-on-Tyne 11, County Durham, England
London, 190 Piccadilly, Princes House, London W. 1,
England



Reading
about

RESOURCES



By MONROE BUSH

A Testament to the Earth

TO paraphrase Tennyson: "Tis better to have tried and failed, than never to have tried at all."

Courage is preferable to caution, though courage as often as not leads men into failure. In the usually timid, hesitant world of publishing, in which caution has clouded some of the best and rarest visions, bravely-conceived undertakings are something to cheer. We see too little "new" publishing. When it comes, we must welcome it with loud hosannas, whatever its failure.

This Is The American Earth (Sierra Club, San Francisco. 1960. \$15.00) is the handsomest and, in many respects, the most important book in the pursuit of conservation that has appeared in recent years. That it fails at what it attempts is not to be counted against it, for never to my knowledge has so much been attempted by conservationists through the vehicle of a single volume.

Authored by Ansel Adams and Nancy Newhall, **This Is The American Earth** has the proud audacity to attempt to relate the American man to his earth-stage. It strives to place us humans in the physical scheme of things. That such an effort could never completely succeed must have been self-evident from the outset. That Sierra Club leaders had the temerity to give it an heroic try, however, required no less spirit and spunk than climbing their beloved mountains.

The medium for this exploit is a superb marriage of photographs and blank-verse poetry, offered to us readers on the silver platter of a striking physical format—the paper, the type style, the binding, all are front rank. Tracing both man and earth from their beginnings to the present sad imbalance between the

two, the entire production strikes a between-the-eyes blow for a new responsibility in man's use of earth-wealth—very likely the most powerful blow since Aldo Leopold's essays appeared.

No one could examine this book without feeling a tremendous respect for the incomparable photographic skill of Ansel Adams, and for the work of a score of his colleagues which is included also; without gratitude to Nancy Newhall for her courage in attempting what has never been done successfully before, and what even now remains to be done successfully; and finally, no one could leave this book without a fresh conviction that we have somehow bungled our use of the earth, and that this is a desperately serious thing. The book's failure rests chiefly in the hurried, partial, sometimes superficial manner of the job. The subject is a very, very thick one for a book of only eighty-nine pages. Consequently, the authors can do no more than suggest a hundred avenues they have not time to explore. The fortunate thing is that they suggest with such persuasiveness.

Adams is one of the few men who has made an art of photography. His photographs, "Sundown, the Pacific," "Pasture, Sonoma County," and "San Francisco from TV Hill," are worth the price of the book in themselves. I have seen few pictures as exciting as these. I have seen none that I would rather hang on a wall. This is strong and heady stuff.

Nancy Newhall has divided her text into six sections. The breakdown is logical in itself, but the start-and-stop of chapters may call unnecessary attention to the thinness of a story line that covers too much ground, too fast. Poetry should

be implicit, but Miss Newhall's text is vividly explicit. It asks less of the imagination than we have a right to expect of poetry. It has none of the depth and shattering insight of Walt Whitman. It has none of the incredibly delicate lyricism of Sidney Lanier.

In reading it a second time, slowly and thoughtfully, I had increasing difficulty conceiving of this as poetry at all. It is always pleasant and purposeful, but without the photographs, it would be undistinguished. Yet photographs and text manage to serve one another in an imaginative way.

The one unfortunate aspect of the book is Miss Newhall's excursion into philosophy. Time and again the text comes perilously close to pure nature worship. All too often it sounds far more Japanese, for instance, than it does Western. This is any author's privilege, but it is helpful to be cognizant of what goes on. I cannot believe that a sound conservation ethic either requires or is strengthened by nature worship, and my personal taste would have encouraged Miss Newhall to restrain her flights into philosophy, which is no place for us amateurs.

When she speaks of man, in a section entitled "The Crucial Resource," she becomes authentically lyrical, but her ideas are fuzzy. The 19th century humanism of this last chapter is pretentious and naive. In all, her concepts appear to me to lack completely that theocentric orientation which gives such durable wisdom to that truly great poem, "The Marshes of Glynn."

But had a book of this scope succeeded at every point it would literally have been too good to believe.

(Turn to page 44)



AFA's Chief Forester Kenneth B. Pomeroy, left, identifies a species of holly for students Elaine Brown, representative of the school's Green Thumb Committee, and Tom Talley, who is in the seventh grade.

Examining landscape plans for the Kenmore Junior High School, Glen Carlyn Park, Virginia, are, left, Dr. James W. Tyler, Boris Timchenko, landscape architect, and J. S. Magnone, advisor, Student Council

Photographs by Vincent Finnigan



Elaine Brown, Green Thumb Committee, sparked the fund raising campaign.



Gathered for the Arbor Day ceremony are, from left, Kenneth B. Pomeroy, Tom Talley, Elaine Brown, Dr. James W. Tyler, J. S. Magnone, and Boris Timchenko.



Arbor Day at Kenmore

IGNORING wintry blasts so severe that classes could only be held on three of the preceding six school days, 1,000 students of the Kenmore Junior High School at Glen Carlyn Park, Virginia, determinedly held Arbor Day ceremonies on schedule—the second Friday in March as prescribed by Virginia law. The events leading to the occasion became a test of the saying, "Where there's a will, there's a way."

Last year a new school was constructed in this rapidly-growing Washington suburb. As usual, the bulldozers did not leave a single tree on the 33-acre tract. Furthermore, no funds had been provided for beautification. Determined that their "plant" should not look like a factory, the students began casting about for ways to improve its appearance.

Early in January, Boris Timchenko, a Washington architect of 30 years standing, offered his services if \$600 could be raised for planting stock.

Promptly a Green Thumb Committee of 16 students began a campaign for funds. They cut out and posted "trees" in each home room, prepared "commercials" for delivery over the public address system, sewed "Green Thumbs" for all con-

tributors, decorated containers to receive the money, exhorted friends to donate gum-money, and of course counted the "take" each night.

Competition between home rooms and grades became so intense that students absent because of sickness frequently telephoned to find out how the class stood. (There is no record of anyone inquiring about lesson assignments.)

The campaign was moving along smoothly, although not too successfully, when a series of late snow storms threatened to wreck the whole program. Each time it snowed, the buses were unable to run, school was closed, and no money came in.

At that point resourceful students turned adversity to their own advantage. Snow shovelling became the order of the day. One energetic lad turned in \$14 from his labors. Young ladies turned their talents to baby-sitting. The campaign went over the top with a bang.

To the top room, section 8-16, went the honor of electing the Green Queen. They chose their teacher, Mrs. J. B. Webb.

The seventh grade raised the most money per student, an average of 70 cents each. They bought a lovely red maple tree. The eighth grade bought a pin oak and the ninth

grade a white birch clump.

The Arbor Day ceremony was conducted in the auditorium because of the inclement weather. Mr. Timchenko presented the student body with a completed landscape plan for guidance in future plantings. Elaine Brown, leader of the Green Thumbs, introduced Kenneth B. Pomeroy, chief forester of The American Forestry Association, and his subject, "Why Arbor Day?"

"Trees have been important to man since the beginning of time," Mr. Pomeroy explained to the students. "In the beginning trees furnished our forebears with shelter, food in the form of edible fruits and nuts, and crude weapons. As civilization progressed, nations began to expand according to the abundance of their natural resources. Some who squandered their inheritance passed into oblivion.

"Fortunately, our country is blessed with abundant forests," he continued. "Nevertheless, it is necessary for all of us to plan for the future. This is the significance of Arbor Day. It is the one occasion on which we look to the future. Other memorial days observe some past event. But on Arbor Day we plant a

(Turn to page 51)

Snow Guardians At Squaw Valley

(From page 15)

Monty in the U. S. Army's 10th Mountain Division for the Italian campaign of World War II. He has been with the Forest Service since then, working on avalanche control problems in the west and perfecting various control techniques. By the time he arrived in Squaw Valley there had already been accumulated an impressive history of the avalanche situation—a history which regrettably included two fatalities and considerable property damage. Here was clearly a situation which called for concentrated control action if the slopes and race courses selected for Olympic competitions were to be available and safe at the scheduled times, regardless of natural conditions, and if all the planned improvements were to be protected.

Many people not familiar with snow and mountains do not realize the danger of avalanches. In 1910 an awesome avalanche at Wellington, Washington, near the present Stevens Pass ski area, swept two trains from their tracks, carried them across a 260-foot plateau, and buried them in 40 feet of snow at the bottom of a 400-foot canyon. Some of the bodies were never identified, and only seven people survived out of 125 in the path of the slide.

An entire community can be, and has been, wiped out by avalanches. A series of slides knocked out the town of Alta, Utah, in 1874, leaving more than 60 people dead. It was here at the ski resort of Alta that the Forest Service 19 years ago began its avalanche control program. All of this work through the years paid off at the Winter Olympics of 1960.

The key national forest lands leased in 1948 by the Squaw Valley Development Company were relinquished because of the exigencies of the coming international competitions, and a term permit was issued to the California Olympic Commission. With this permit the state of California accepted responsibility for snow safety, and snow ranger Dick Stillman was persuaded to take leave of absence from the Arapaho National Forest and take on the impressive title of Olympic Snow Safety Leader. He is a protégé of Monty Atwater, who continued to act as mentor at Squaw Valley. Dick also hired four competent skiers to assist him.

During the pre-Olympic trial events in 1959, however, it was apparent that Sierra storms could readily create conditions under which even this skilled crew could not guarantee to have all Squaw Valley peaks and slopes safe for use according to our pre-set competition schedule. Arrangements were made for selected men from Forest Service ranks to be on hand for such emergencies, and the resulting snow safety organization was probably the most competent one ever assembled anywhere.

From widely dispersed locations in the western United States came Roy Feuchter, Ross Files, Paul Hauk, John Herbert, Bob Janes, Paul Madden, and Bob Safron. They came from a variety of administrative positions, from forest ranger to assistant regional forester. But to the public they were all Snow Rangers, in their distinctive green parkas with the Forest Service shield. Together with Dick Stillman's crew and under Monty Atwater's competent guidance they guaranteed the competitor and spectator safety. With the use of such spectacular Army-furnished devices as recoilless rifles and bangalore torpedoes they kept the avalanche hazard at bay, their post-dawn cannonading awakening many a sound sleeper. They also cascaded away hundreds of tons of unstable snow by a tricky procedure known as protective skiing, which consists of skiing across an avalanche trigger point with sufficient speed to get out of danger a split second before the slide starts. Furthermore, Dick and Monty developed a new way of bombing certain avalanche paths with delayed-action explosives—not from an airplane, but from the chair of a moving ski lift.

The role of the Forest Service in the Olympic effort did not begin or end with snow safety, however. Many of the site development features were only king-sized versions of what had already been done on other national forest winter sports areas, and our accumulated background in ski area planning came into full play. Part of this involved preserving the forest setting, which the general contractor was prone to have removed so that his bulldozers, cranes, and draglines could have

more freedom of action; the pine-studded Olympic complex which resulted is evidence of our success. The entire Olympic Village, the cluster of administrative buildings, and the daytime accommodations for tens of thousands of spectators all stand in a distinctive forest environment.

Development plans called for the building of ski jumps, a chair lift, and the clearing of slalom runs on the north face of Papoose Mountain, and here the forest considerations went considerably beyond esthetics. Our Squaw Valley background by now had taught us that the north slope of Papoose Mountain, where the Olympic ski jump and slalom runs were located, is subject to strong cross-winds. These winds could be severe enough to blow a jumper off course during his four to five seconds of flight and so affect his aerial stance as to seriously endanger him at the moment of landing. Therefore, the jump was designed to fit entirely into the forest, in contrast to the more traditional type which uses a scaffold for the upper portion. But retaining the forest windbreak was a continual problem, for bulldozer and dragline operators wanted more freedom of action and would have preferred to clear off much of the timber stand. Through daily supervision the Forest Service concept prevailed, however, and the Squaw Valley jump is now acclaimed as the best 80-meter jump in the world.

To a considerable extent, the same type of problem involved the Papoose Mountain chair ski lift, constructed a short distance away to serve the top of the ski jump and also to haul slalom skiers to the summit of the mountain. Lift builders constantly fear the possibility of falling trees hitting the moving lift cable and wrecking the structure, and prefer to clear a wide right-of-way through forested terrain. At Squaw Valley, such a clearing would have seriously lessened the windbreak effect of the forest. On the Papoose lift we allowed clearing only slightly beyond the span of tower cross-arms and relied on the forester's practiced eye and the increment borer to ferret out unsound trees in the adjoining stand. Those tall enough to reach the lift cable if



CLEANUP GOES FASTER

with New John Deere Single-Stick Control

Instead of two steering levers and a direction-reverser lever, the John Deere Pilot Touch Crawler has a single stick that takes over all three jobs. One hand operates the tractor—steers it left and right, shifts it forward and back. There's not only less operator fatigue, but less lost motion—the right hand never needs to leave the dozer controls. The result—faster work at lower cost.

Pilot Touch single-stick operation, a John Deere exclusive, is provided as built-in extra equipment on "440" Diesel and gasoline crawlers.

For full information and a demonstration on your show, see your John Deere Industrial Dealer. Contact him through the classified telephone directory or write today.

Immediate Ownership

The John Deere Credit Plan permits immediate ownership of the efficient equipment you need to cut costs now. All arrangements are made with the John Deere Industrial dealer, in strict confidence.

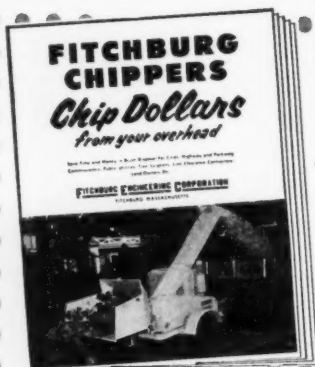
John Deere Industrial Division • 3300 River Drive, Moline, Illinois

JOHN DEERE



"Specialists in Low-Cost Power with a Heavyweight Punch"

FREE BOOK



Tells how you can cut brush disposal costs up to 50%

Read about the money-saving experiences of:

Cities, Highway and Parkway Commissions,
Public Utilities, Tree Surgeons,
Line Clearance Contractors, Land Owners

Learn why they selected Fitchburg Chippers. How they use them as efficient labor savers — builders of good public relations. How they have cut disposal costs up to 50%.

See cutaway color drawings of the Fitchburg Chipper — the exclusive Fitchburg spring activated feed plate — pictures of different models in action.

Get this new Fitchburg book, fact-packed with specifications, diagrams, charts, plus profitable suggestions, tips, and vital information.

MAIL FOR FREE COPY TODAY!

FITCHBURG ENGINEERING CORPORATION

Fitchburg, Mass., Dept. AF-64

Send Free Copy of "Chip Dollars from Your Overhead"

Name _____

Address _____

City _____ State _____

felled were taken out. Similar considerations and procedures were used in the clearing of race courses, both on Papoose Mountain and elsewhere.

It will be of interest to foresters to know that the north slope of Papoose Mountain in 1906 was the scene of the first national forest timber sale in California. The man who wielded the marking axe was a young forester by the name of Bill Greeley. He could not have guessed then that the forested slope which he was so carefully marking for selective cutting would, more than half a century later, accommodate the VIII Olympic Winter Games, any more than he could have been certain that he would some day become the third chief of the U. S. Forest Service. But today that mountain slope, as well as the pine-studded Olympic site on the valley floor below it, are ample evidence that the guiding hand of foresters contributed a great deal to the proper staging of the Olympic Winter Games and to the further public recreation potential of the area. Under permit and supervision of the Forest Service the site is now to be managed for year-round recreation by the California Division of Beaches and Parks; in its winter phase the operation will follow the pattern and tradition set by the guardian snow rangers at Squaw Valley during the Winter Olympics.

Squaw Valley and surrounding sites probably will not develop rapidly as winter sports centers. The Forest Service has proposed a master plan for the development of a huge ski and winter resort complex, the first European type, with the Olympic facilities as a basic part of it. For years the skier's finale in this country has been back to the lodge. In Europe a skier starts in one village, rides a lift or cable car, and

may end up miles away in another village, having skied eight or 10 miles without a stop. That's what U. S. skiers hope for here. Under the master plan, winter sports enthusiasts would have about 20,000 acres for skiing, a skating facility at Squaw Valley, and overall a nationally unrivaled winter sports area.

But even so, Squaw Valley is only a part of the winter sports picture on national forests. All or part of more than 200 ski areas are on these public lands, with facilities built and operated by private companies under paid permit. These facilities are being expanded to take care of the increasing use. Of the 81.5 million total recreation visits on national forests in 1959, about four million were made into ski areas; this number probably will rise to five million for this winter and spring.

In addition to Squaw Valley, ski facilities are at Mammoth Mountain, China Peak, Mt. Blady, and Heavenly Valley in California; Timberline Lodge and Government Camp on Mt. Hood in Oregon; Aspen and Berthoud Pass, Colorado; Alta and Snow Basin, Utah; Snoqualmie Pass and Stevens Pass, Washington; Arizona's Snow Bowl; Santa Fe Basin in New Mexico; Caberfae in Michigan; Tuckermans Ravine and Waterville Valley in New Hampshire; Big Bromley in Vermont, and others.

Some new developments include Aspen Highlands in Colorado, Bachelor Butte in Oregon, Mount Snow and Sugarbush in Vermont, Mt. Shasta in California, Lookout Mountain in Minnesota, and Grizzly Peak in Montana. Over-all it looks as if winter sports will be assuming a larger role in the fast-growing national-forest recreation use — which is only one of the multiple resources which people get from these public lands.

What Kind of a Park?

(From page 19)

and again and behind him stood a chorus of other witnesses stating that they are for preservation principles as applied to the great outer beaches when the park idea was first advanced and when there was no intention of going to the bay side of Route 6 and incorporating the network of little ponds that dot that sector.

"Doesn't it really come down to the use of the beaches?" Mr. Biddle inquired. "What are the beaches? Let's compare them. At least in my

neck of the woods nobody except those who are very near them use the beaches. The great beaches are the beaches of the magnificent dunes and you have, what, 100 miles of them. I can't remember exactly. But those are the beaches you want to preserve."

Meanwhile the floodtide of support for S. 2636 in its entirety continued to roll into the record. National and state groups, some with as many as 100,000 members, endorsed the bill in its entirety. So did

TIMBER SUPPLY IN THE SEABOARD SOUTHEAST

Despite the extraordinary growth of the pulp and paper industry in the past two decades, present indications point to the necessity for further increased capacity in the near future.

Nowhere are the fundamentals more favorable for this expansion than the Seaboard Southeast, where timber is being grown faster than it is being used.

In the six states of Virginia, North Carolina, South Carolina, Georgia, Alabama and Florida, more than 113,000,000 acres or 60% of the total land area, are in growing forests, insuring a continuous supply of low-cost pulpwood. Numerous streams afford an abundance of water for pulp and paper operations.

FREE SITE INFORMATION

When you are in the market for a pulp and paper location, converter plant, or distribution facility, let us submit details on some of the excellent sites which we have catalogued in this area.

Address: Warren T. White
Assistant Vice President
Seaboard Air Line Railroad Company
Richmond 13, Virginia



SEABOARD
AIR LINE RAILROAD



THROUGH THE HEART OF THE SOUTH

a few Cape Codders themselves. But the attitude of most of the local residents might be characterized as: "pro-park, but *what kind and how much?*"

The factors that make the over-all bill palatable to Cape Codders at all are five safeguards the authors have woven into it to protect the six towns. These proposals are: 1) each residential land owner is given a minimum guarantee of electing either life occupancy or occupancy for 25 years; 2) in any of the six towns which adopt zoning, meeting standards defined by the Secretary of the Interior, all home owners in those towns whose property lies within the diagram of the park are assured of the right to continue to own and occupy their homes without interruption or interference so long as the zoning is kept in force; 3) in order to accommodate the possible growth and revenue needs of towns with land in the park, there is provision for setting aside in the future an acreage up to 10 per cent of the total private land in each town which falls within the park for new home building on the condition that such property is subjected to acceptable zoning; 4) there is an in lieu tax provision to give the towns a shock absorber in the event that there is a dip in tax revenue as a result of acquisition of private property in fee simple by the federal government; and 5) this bill establishes an advisory commission which will "have substantial influence in setting the policies governing the establishment of the park and its future administration."

In the event the bill should be enacted in its present form, which seems unlikely, many local people

indicated that they could live with these provisions provided they were further liberalized. For instance, the setting aside of 10 per cent of the total private land in each town for new building was not believed to be enough by many witnesses. Some said the proposed "advisory commission" wouldn't have sufficient power, although Biddle differed with them on the grounds that advisory commissions of *experts* didn't need to have power—they had something far better—prestige.

A more germane question to many, however, is not whether Cape Codders can live with the five points but, rather, whether the National Park Service can. To many laymen, at least, this idea of running a park replete with a sort of zoo in the form of human beings looks like a delicate proposition. It could also be a rather expensive one, and one wonders if the ceiling of \$15 million proposed for park development would begin to cover it.

The Interior Department hasn't given the official word as yet on how it views these proposals. But in a letter inserted in the hearing proceedings, Under Secretary Elmer F. Bennett states that while some of the bill's proposals are "novel" in national park legislation, at the same time "we view them sympathetically because of the particular problems encountered in this project, and we believe it reasonable to expect that if agreement can be reached on the general approach, there should be no insurmountable difficulty in working out the details."

In the light of the Saltonstall-Kennedy bill, Interior has now gone back to gather more data on the

problems it is likely to encounter in the six towns. One imagines it will find them aplenty, ranging from problems of municipal management to questions of how to make a living. For example, Mrs. Winslow testified that some families who live on less than \$2,000 a year make out by picking bayberries for candles, blueberries, pine cones for Christmas ornaments, etc. Would these pursuits be stopped in the event the area became a park, Mrs. Winslow asked?

Meanwhile, the debate continues up and down the Cape. Many civic leaders and the spirited *Cape Codder* newspaper agree there will be a park, somewhere. Others, like the Rev. Earle B. Luscombe, of Wellfleet, thunder that the proposal constitutes "a threat to the liberties of the American people." In carrying on his fight, Rev. Luscombe has also resorted to verse. The last stanza of his "For the Present Hour" (inserted in the hearing proceedings), reads:

Men of the Lower Cape, come meet
The foe, cast off all lethargy;
Arise to meet the present hour!
As men by heavenly right made free
Assert yourselves with God-given
power!
Encroaching on your honored land
Is no man's right! Invincible
Is not the foe! Inevitable
Is not the grasping of his goal!
Rise up, oh men, and take your
stand!

Town meeting is in session once again on the Cape, and fascinated Americans everywhere continue to watch with interest. As usual, everyone is having his say and out of it will come, one is convinced, plausible solutions that will meet the needs of the hour. (J.B.C.)

Reading About Resources

(From page 37)

That it fails no worse than it does, considering the ambitious concept of the project, is a tribute to the courage and intelligence of all concerned, by all means including Miss Newhall.

From the interminable shelves of conservation-resource literature, you could not choose a more powerful volume. This is a book to own.

NEW AND TO NOTE

The Mammals of North America, a lavish two-volume set by Drs. E. Raymond Hall and Keith R. Kelson (Ronald Press, N.Y. 1959. \$35.00 the set), is a total reference library in its field. One does not find here all that

is known of the mammals, nor was that intended. There remains an important place for the specialized works, the studies in depth; but for quick scientific reference, this set is a fundamental contribution to the libraries of America. The authors have included a great deal of related material, and we can only salute them for the lifetime of dedication that such a project requires.

Another workmanlike job has arrived in the American Forestry Series published by McGraw-Hill: **Fundamentals of Forestry Economics** (New York, 1960. \$9.50). Authored by William A. Duerr, this book is sure to

prove itself a successful textbook, and for those of us beyond the blissful student years it can be equally valuable. Too often our scope of understanding narrows as we progress, and men concerned with the dollars-and-cents of forestry will find here a sudden recall to mind of much that they have forgotten—and, perhaps, much that they never knew.

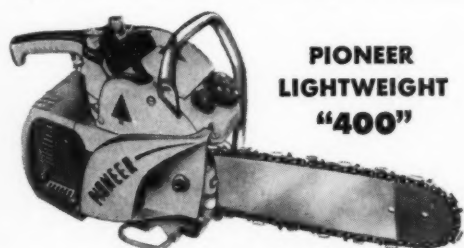
I found Part IV, "Institutions of the Forest Economy," especially interesting. How true it is that we get so close to the trees, we lose all sight of the larger forest forces that are pushing and prodding us. There's meat here for any forest-involved



**New high power! New low weight!
Rugged production champ
brings new logging power
to toughest big timber cutting!**

Meet the Pioneer 600—all new from grip to tip, built and balanced for easy handling, comfortable cutting. New performance features mean real on-the-job dependability. Result: less down time, low maintenance, more profit for you.

New quick-action starter gets you going easily. Pioneer all-position carburetor assures full power cutting at any angle. And Pioneer piston-porting eliminates troublesome reed valves. Positive heavy flow oiler right at your finger tips and new low temperature muffler for less noise, maximum safety. Matchmated Pioneer cutter bars and chains up to 32 inches.



**PIONEER
LIGHTWEIGHT
"400"**

Here's the new all-purpose chain saw you've been waiting for. Perfect for fast, easy trimming, limbing and all your light wood cutting jobs. Same superb quality and performance features of the all new 600. Ideal for farm, estate, tree surgeons and heavy industrial users.



**PIONEER
CHAIN SAWS**

DIVISION OUTBOARD MARINE CORPORATION • WAUKEGAN, ILLINOIS

Makers of Johnson, Evinrude and Gale Outboard Motors
Lawn-Boy Power Mowers • Midland Power Garden Tools
Cushman Utility Vehicles

**MEET THE NEW CHAMPIONS
OF THE WOODS**

PIONEER "600"

**RUGGED HIGH-PRODUCTION
CHAIN SAW**



FREE CATALOG

for the
PROFESSIONAL FORESTER

Forty-eight pages, illustrating hundreds of items — a complete line of supplies and equipment for the fields of Forestry . . . Wildlife Management . . . Soil Conservation . . . and Nursery Management.

Enjoy money-saving prices too, all from one dependable, central source — NASCO — the International Agricultural Leaders Supply House.

If you haven't received your free copy of NASCO'S Forestry Catalog No. 6, write today . . . then try our service! Prompt delivery — satisfaction guaranteed or money back.

NASCO Forestry
Catalog No. 6—
48 Pages
Fully Illustrated



NASCO

FORT ATKINSON, WISCONSIN

"SUPPLIES AND EQUIPMENT
FOR THE PROFESSIONAL"

Precision Tools for Foresters

SANDVIK
BUSH
AXE...

FOR BRUSH
AND SAPLINGS

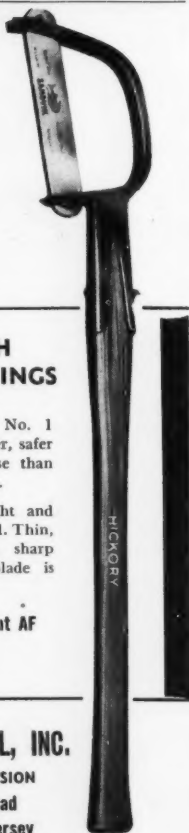
This Sandvik No. 1 Bush-Axe is faster, safer and easier to use than the common axe.

Light in weight and properly balanced. Thin, flat and extra sharp Swedish Steel Blade is replaceable.

Write Department AF
for Foresters'
tool catalog.

Sandvik STEEL, INC.

SAW & TOOL DIVISION
1702 Nevins Road
Fair Lawn, New Jersey



person serious about his job.

And speaking of being involved, little excuse exists these days for us, involved as we are in our immediate regions, not to know these regions well. The following new books, just received, are only a sampling, albeit a good one, of the local studies that are fast filling the gaps in our knowledge of the natural world:

Wildlife of Mexico, The Game Birds and Mammals, by A. Starker Leopold, The University of California Press, Berkeley. 1959. \$12.50.

The Wild Animals of Missouri, by Charles W. Schwartz and Elizabeth R. Schwartz, The University of Missouri Press and the Missouri Conservation Commission. 1959. \$5.95.

Guide to the Wyoming Mountains, and Wilderness Areas, by Orrin H. Bonney and Lorraine Bonney, Sage Books, Denver. 1960. \$6.50.

The Vegetation of Wisconsin, An Ordination of Plant Communities, by John T. Curtis, The University of Wisconsin Press, Madison. 1959. \$7.50.

Alaska In Transition, The Southeast Region, by George W. Rogers, Johns Hopkins Press, Baltimore. 1960. \$7.00.

Dream Orchard

(From page 22)

spring and autumn I had carried fertilizers — commercial, barnyard, and rich leaf-rot loam I gathered from the hills, and mulched them into the soil around my peach trees. I hauled the fertilizers to the bottom of the bluff where I unloaded and carried them by bucket and sack upon ground too steep to take the truck.

These trees had grown up sturdy enough for wild trees. The bark looked healthy and smooth, and the twigs were pink in this early spring. But these trees, despite all my babying them to grow, were not as sturdy and healthy as my nursery-ordered peach trees less than a quarter-mile away.

My wild trees were pink masses of blossoms this fourth spring. Each tree looked like a flaming brushpile on fire when the spring winds stirred its boughs. The honeybees were really treated to a feast. Day after day in the short season of their blossoming I stood among the trees, listening to the working hum of the industrious bees clustered in a mass

PANAMA

- B.B. Fan Drive Pumps
- B.B. Slip-on Units
Pump and Engine
- Slip-on Units Complete
Pump, Engine, Tank, Completing Materials, All on steel skids
- Compensating By-passes
- High Pressure Hose
- Pistol Grip Cut-offs
- Combination nozzles
- Vacuum Lift Systems
- Automatic Float Valves
- Tree Injectors
Pressure Type
- Tree Marking Guns
Pressure Type
- Stainless Steel Drip
Torches
- Flame Guns
- Angle Gauges
For Estimating Basal Area

Write For Free Catalog

PANAMA PUMP CO.

410 So. 37th Ave.
Hattiesburg, Mississippi



HAS IT OCCURRED TO YOU?

There are many members and friends of The American Forestry Association who find it impractical to contribute to its educational activities during their lifetime. Gifts in the form of a bequest are welcomed. Officers of the Association will gladly consult at any time with those who wish to know more about designating gifts for educational work in forest conservation.

Following is a paragraph suitable for incorporation in wills:

"I hereby give, devise and bequeath _____ to The American Forestry Association, Washington, D. C., a non-profit District of Columbia corporation, or its successor, or successors, for the purpose of promoting the corporate activities of said Association."

THE AMERICAN FORESTRY ASSOCIATION

919 Seventeenth Street, N.W.
Washington 6, D. C.

of blossoms unequaled in beauty in any orchard I'd ever seen. My tame orchard of selected fruit had fewer blossoms. While I stood surrounded by trees that had grown from wild seedlings, I dreamed of the kind of fruit these trees would bear. And this summer would be the test, since we hadn't had a single frost or freeze in early spring to kill the budding fruit.

These young trees were so full of green fruit that their branches resembled blackberry vines laden with green berries. Long before the fruit grew to maturity I had to prop the overloaded branches. As the fruit grew, not to the size I had expected, I had to add more props under each tree. Had the peaches grown to the size of those on the tame trees, I wouldn't have had a tree left in my Dream Orchard, no matter how many props I used. Each tree would have splintered to pieces under the weight of prolific productivity.

My young nursery fruit ripened first. Here, I picked peaches large as tea-cups; red-cheeked and delicious, they looked like the pictures in nursery catalogues. "These trees were bearing for the first time, and they were a year younger than my wild seedlings. Due to my dream of experimenting with the wild trees, I had given more time and care to my dream orchard. I reaped a bountiful harvest from my nursery-brought-on fruit. I could not ask for a better yield or more delicious fruit.

Almost a month later came the time to gather fruit from my wild trees. First I checked the fruit on the trees I thought were the Daughtery Peach. I didn't have the peach I remembered gathering when I was a small boy working for Win Daughtery. The ripe red little peaches that swayed on the propped-up branches were no larger than wild crab apples. I was disappointed since I did not have this dream peach in my dream orchard.

Picking these small peaches reminded me of gathering handfuls of black berries from loaded vines. In a few minutes I had filled my half bushel basket which I took to the house to show my wife, Naomi.

"They're too small to peel," she said, "there's not enough peach between the skin and seed." She fondled first one peach and then another, going over the little pink-cheeked peaches on the surface of my heaped basket. "I can't do much with these," she said.

"All my work and this is my re-

In Forest Land Management...

More Timber through WEED TREE CONTROL with WEEDONE Chemicals!

On thousands of acres of managed forests Weedone Chemical Brush Killers are paving the way to maximum production of timber products. Weedone chemicals and techniques have proven to industry, experimental stations and forestry experts that timber stand improvement can be efficient and economical.

To its long reliable line of chemicals for Forest Land Management Programs, Amchem has added recent herbicide developments which now provide products and techniques for successful application to any forestry problem. The Amchem chemicals listed below, when applied according to directions, are your assurance of the most effective program to meet your specific requirements—

WEEDONE

special air spray formula

WEEDONE

brush killer 977

TRINOXOL

AMIZOL

DINOXOL

WEEDONE LV 4



Write for comprehensive free folder that describes the right Amchem Weed Tree Control Program to fit the conditions of your forest. Includes specific application directions, seasonal factors, regional considerations, other valuable data.



AMCHEM PRODUCTS, INC.

Amchem, Weedone, Amizol, Trinoxol and Dinoxol are registered trademarks of AMCHEM PRODUCTS, INC. (Formerly American Chemical Paint Co.)

AMBLER, PA. • St. Joseph, Mo. • Niles, Calif.

ward," I sighed. "I wanted some canned wild peaches this winter!"

Naomi tried to can some of the wild peaches. There were two colors among them. I had white and pink peaches in my orchard. I picked four baskets of each and brought them to Naomi to can. I carried away, or so it seemed to me, more waste and seeds and peelings than there were peaches. After Naomi and I worked to can those peaches, we had four quart jars of white and four of pink peaches. They were beautiful in glass jars with contrasting colors before us on the table.

"That's the most work I've ever done for a few jars of peaches," she sighed. "This doesn't pay."

"I agree with you," I said slowly. "The yellow-jackets and honeybees are very hungry since the summer blossoms have faded. I'll turn the orchard with its bending trees of fruit over to them."

The next day I went back to the orchard to watch yellow-jackets and honeybees flying from peach to peach, eating small holes through

the skin to the seed. While I looked at this dream orchard, I thought of the work and time I had spent here. Then I thought of my large nursery peaches, each one too large to go inside a teacup, growing on trees where I had spent so little work and time.

The little holes they had eaten into the peaches were as round and perfectly shaped as if they had been bored by a miniature auger. The yellow-jackets and honeybees still seemed hungry despite the orchard's being loaded with wild fruit. Upon a most careful examination of a peach, I learned there was a very thin body of fruit-flesh under the skin and around the big seed. Since the bees wouldn't eat the skin and couldn't eat the seed, they weren't getting much to eat.

Now I wondered just what kind of peaches our forefathers had grown here a century ago! Had this fruit been better in their time, and had it degenerated in the years it had survived the wilderness? If it had, how long, how many years, would it be before it would revert

to its normal size? Or had we improved fruit until a favorable contrast was my mild and tame peach, wild crab apple size to that of a softball?

I hadn't any plans to extend my experiments to see if this wild fruit would grow larger from year to year. I figured that if I did, I would not live long enough to see it catch up with the fruit in my tame orchard. So why bother any more about such an experiment, when my dream had been shattered into a mild disillusionment?

Thoughts kept running through my mind while I stood here summing up the personal benefits of my physical and mental labors in this experiment. The thought finally selected these words to clothe itself, a thought perhaps not too outstanding in word dress but clothes enough to describe the only value I had received from my Dream Orchard:

"Here is my orchard, now laden with fruit;

I'll take its blossoms and give you the loot."

Covered Bridges: Links With the Past

(From page 27)

handle. The replacement of one of these timbers was a major operation. So, the simple thing to do was to build a roof over the bridge to protect it. And thus the covered bridge was born.

The first such bridge in this country, according to the records, spanned the Schuylkill River in Philadelphia. It was opened to traffic on January 1, 1805. There was some debate concerning the covering of the bridge; the final decision to include this rather revolutionary change in bridge construction was based on the need to protect a large investment. For the bridge was expensive. Its cost of \$300,000 was a great sum of money in a year when the cost of running the entire United States government was but \$10,000,000! A large part of the cost was for foundations; these would still be serviceable if the superstructure required replacement, but the cost of the bridge itself was far from insignificant.

The directors of the bridge company (it was being privately built and tolls would be charged) were properly concerned. Richard Peters, the company's president, observed that the cover on the Schaaffhausen Bridge in Europe had preserved it from decay for 38 years (a very long

time for a wooden bridge) and that it was still sound at the time the French destroyed it. His arguments prevailed, and the bridge was covered.

Almost immediately, coverings were added where practicable to wooden bridges all over America, and just about all new bridges were planned as "covered bridges." It was a great step forward in the use of wood as a building material. And this new concept, with its special demands for a bridge that could be covered conveniently, brought forth a number of new designs and developed a new specialty—"covered bridge builder."

Timothy Palmer, builder of the Schuylkill bridge, was the first of these craftsmen. A Newburyport, Massachusetts architect and house-builder, he built many bridges in New England before his big job in Philadelphia. Palmer was an advocate of the arch bridge and, in fact, was so proud of his intricately-designed arches that he was reluctant at first to cover them. He finally conceded, however, that this protection would lengthen the life of his Philadelphia bridge, and he used covers on all his bridges thereafter.

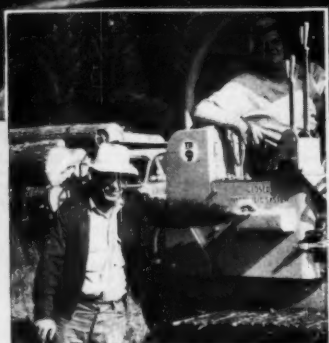
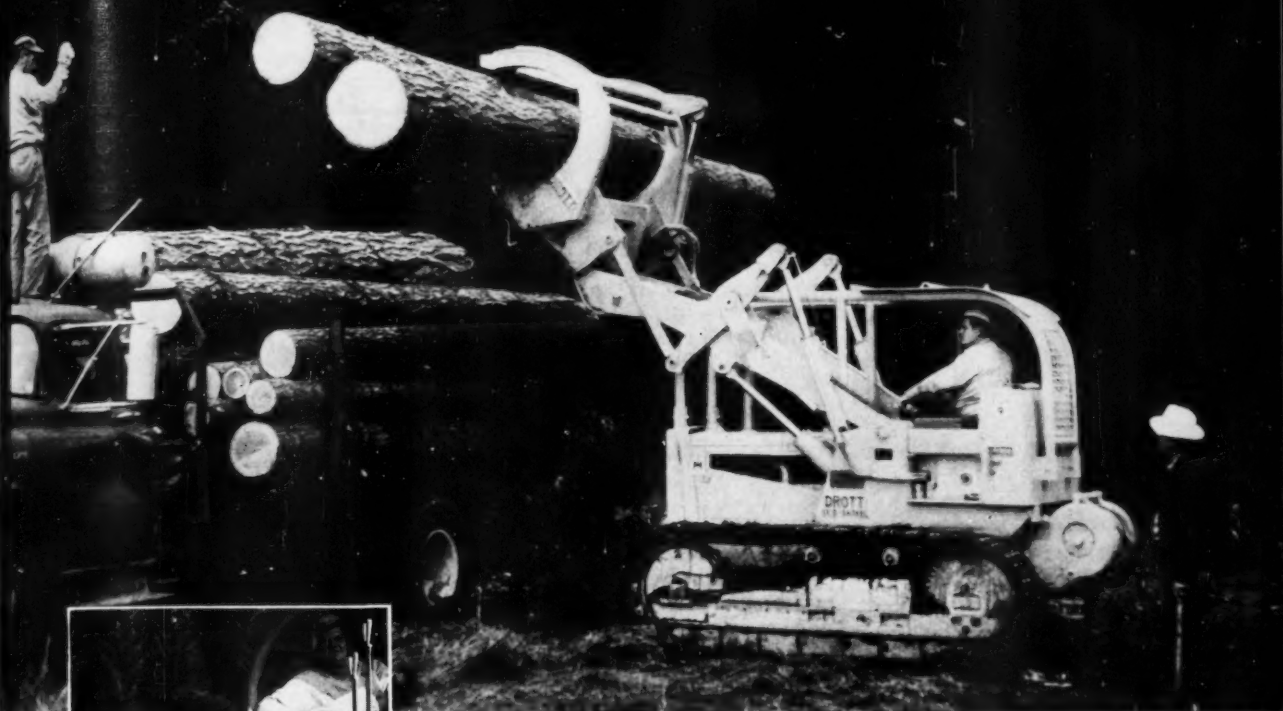
But Palmer's arched bridges did not lend themselves readily to being

covered. It took another New Englander to modify his design and make it more practicable for the new style. Theodore Burr fashioned a heavy, rectangular truss, which could be covered much like a barn, and added heavy arches as the principal structural members. This design caught on quickly and was widely used; many of the still-existing covered bridges have Burr trusses.

Burr himself built a large number of notable bridges. He moved from New England to New York, where he built many covered bridges, and then to Pennsylvania. It was here and in Maryland that he achieved his greatest fame. He once had five bridges across the Susquehanna River under construction at the same time. The Susquehanna is a wide river, even up as far as Sunbury, 122 miles above its mouth, and any one of the bridges that Burr built across it would have been noteworthy in itself. Burr literally wore himself out traveling constantly from job to job, trying to oversee every detail.

Following in the New England tradition of covered bridge building came Ithiel Town. Town developed the "lattice" truss. This was a simple design with the trusses made of lattice-work, much like a rose trellis for a garden. It made an

960
im-
con-
ach,
oft-
my
ruit
ear.
not
up
ard.
uch
had
llu-
ugh
um-
my
this
r se-
f, a
nd-
ugh
re-
den
you
Eng-
and
new
d a
uld
and
ipal
sign
dely
cov-
ber
rom
here
and
here
ved
five
ma
ame
vide
122
one
ross
y in
out
job,
and
ting
evel-
was
asses
e a
e an



Here's owner "Bill" McKee beside the TD-9 Skid-Grapple outfit—and his son Ron, the tractor operator. Note log load in background that's ready to roll!

"Any place the trucks can get becomes a loading spot," declares contract-logger W. W. McKee. Photo shows his TD-9 Skid-Grapple "topping out" a load. Positive "feather-touch" load control makes the job fast, easy, and safe!

"OUR NEW TD-9

Skid-Grapple made us \$500

WHERE I'D FIGURED TO LOSE MONEY"

—W. W. McKee, Ridgefield, Washington

"I'd figured to lose money or at best break even on our TD-9 Skid-Grapple's first job," reports contract-logger W. W. McKee. "It was a slack time job, taken to keep the crew busy.

"But it didn't go as planned. Our production jumped from 10 mbf to 30 mbf daily. The job took only four days instead of seven—and we showed an unexpected profit of \$500.

"The Skid-Grapple made all the difference—loading the trucks faster, better, and more safely. Yarding time was cut as the logs could be loaded almost where the trees were felled."

See what a big profit difference a "load-anywhere" International Drott Skid-Grapple can deliver you—giving top capacity along with minimum-crew economy. Note how the International Drott-developed top grab-arm gives positive load control. Compare plus values like exclusive shock-swallowing Hydro-Spring. Let your International Drott Distributor demonstrate!

It yards 'em and loads 'em too—as this picture proves! Their winch-equipped TD-9 Skid-Grapple saves labor, increases daily production, doubling as skid tractor.

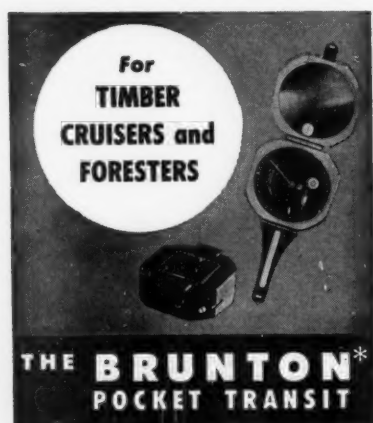


International Harvester Company, Chicago 1, Illinois
Drott Manufacturing Corp., Milwaukee 15, Wisconsin



INTERNATIONAL®

DROTT®



For
**TIMBER
CRUISERS and
FORESTERS**

THE BRUNTON*
POCKET TRANSIT

IT'S HANDY...

weighs only 9 oz.; 2 3/4" x 3" x 1 1/4";
easy to carry in pocket, on belt, in car.

IT'S VERSATILE...

ideal for preliminary and supplementary
surveying; used as a compass, transit,
level, plumb, alidade, clinometer.
Shows direction to 1°; level, slope or
grade within 1°.

IT'S MADE TO LAST A LIFETIME

"Over 60,000 Brunton Transits since 1896"

See your local engineering supply house
or **WRITE FOR CATALOG**

*Brunton is a registered trademark of

WM. AINSWORTH & SONS, Inc.
2151 LAWRENCE ST. • DENVER 5, COLORADO

BETTER SURVIVAL, BETTER GROWTH WITH ROOTSPRED TREE PLANTERS



ROOTSPRED "Lake States" Scalper re-
duces competition 15" each side of
planted tree.

- All our planters cultivate soil to 14" be-
low surface—several inches below bottom
of trench. Promotes early root growth at
deeper levels
- Scalper removed or installed in a minute.
Non-clogging
- Rootspred has an economical, heavy-duty,
lift-type planter at only \$275
- Satisfaction guaranteed on all our prod-
ucts
- We have sharp edge bedlifters and root
pruners

For specifications, prices, photos,
write:

ROOTSPRED
St. Petersburg, Pennsylvania

exceedingly rigid structure which
could, if need be, be moved. That
the South Perkasio bridge was of
Town lattice construction certainly
played a big part in its successful
moving.

After Town invented his bridge
which he, of course, patented, he be-
came more of a promoter than a
builder. He had agents all over the
country. They would sell you for
about \$1.00 per linear foot the right
to build a Town lattice truss bridge.

All of these designs used wood
rather extravagantly. They were de-
veloped by practical men who de-
pended to a great extent on experi-
ence and who put enough wood in-
to the bridges for safety. Another
bridge builder came on the scene.
Colonel Stephen H. Long was an
officer in the Army's Corps of Topo-
graphical Engineers. He was a grad-
uate of Dartmouth College and prob-
ably the first trained engineer to be-
come interested in covered bridges.
Colonel Long viewed the current
bridge design practice as wasteful of
material and set about devising a
wooden truss which would use the
minimum amount of wood to accom-
plish its purpose. The resulting
Long truss was scientifically de-
signed, using principles of me-
chanics.

Colonel Long, like Town, became
something of a promoter, although
he continued his research into effi-
cient bridge design and wrote sev-
eral technical papers on the subject.
In his promotional activities, he car-
ried about the country a model of
his bridge, conveniently fitted into
a wooden box which resembled a
suitcase. But he was, after all, an
Army officer and soon left this work
to his brother while he went back to
other duties. He capped his career
by becoming Chief of Army Engi-
neers.

There was yet one more develop-
ment in covered bridge design which
eventually led to their being super-
seded by iron structures. William
Howe took the Long truss and sub-
stituted iron rods for the wooden
vertical members. These rods, which
could be tightened, resulted in a
stronger bridge, but with the in-
creased use of iron this proved to be
the first step in building all-metal
bridges.

Most of the bridge development
took place in New England and the
Middle Atlantic states, although, as
we have seen, the use of covered
bridges spread over much of the
country. There are covered bridges
still remaining in Georgia, Alabama,

Want A Tree Farm?

You cannot purchase better quality seed-
lings at a more reasonable price any-
where!

We are volume growers, thus are able
to offer you prices low as \$8.50 per
thousand for 3-0 trees.

If you handle large amounts of trees it
pays to deal with us.

Tree Farms for sale. Write Dept. B

McCurdy Bros. Nurseries

MANTON, MICH.

8 Patents. Best
material. Sold by
the thousands.



Best
Chrome
Steel—
Strong,
Durable

THE RENOWNED

CHARLES H. RICH

"Forest Fire Fighting Tool"

Write for Prices and Descriptions

THE C. H. RICH FOREST FIRE TOOL CO.
218 West Bald Eagle Street, Lock Haven, Pa.

SILVA COMPASS

Easy, Precise, Fast to Use!

Recommended by foresters. Built-in
mechanism to adjust for declina-
tion; sighting mirror; many
other features. Write for free
literature and instructions.

SILVA, INC. La Porte, Ind.

DEPT. A



WOODMAN'S PAL

The Sportsman's brush-axe, for adven-
turous days in field and forest! Makes
play out of clearing trails and campsites;
building campfires, lean-tos and shelters!
IDEAL GIFT FOR OUTDOORSMEN
THE VICTOR TOOL CO. INC.
BOX 474, OLEY, PENNA.

When Writing Advertisers—

Please Mention

AMERICAN FORESTS Magazine

AFA MEMBERSHIP

Any person or company may become a
member of The American Forestry Associa-
tion upon application. There are five classes
of Membership:

Subscribing, per year	\$6
Subscribing, 2 years	11
Contributing, per year	10
Sustaining, per year	25
Life (for individuals) no further dues	150
Patron (for individuals) no further dues	1000

All members receive monthly copies of
AMERICAN FORESTS Magazine.

and other southern states. They can be found on the West Coast in California and Washington as well as in Oregon. The Middle West has its covered bridges, and they are many.

It is possible to visit a considerable number in the space of one afternoon if you happen to be in certain sections of the country. Convenient to Conway, New Hampshire, for example, are six covered bridges, including one which carries U. S. Route 302 over the Saco River. This is one of the few covered bridges on a U. S.-numbered highway. At Windsor, Vermont, is the 460-foot-long covered bridge over the Connecticut River, and just west of Windsor is a group of small bridges which, while in no way extraordinary themselves, have charming settings. But you can find covered bridges almost anywhere in Vermont; the small state has, by recent count, 124.

Pennsylvania has the oldest still in service—the Hays bridge across Conodoguinet Creek west of Carlisle. It was built in 1825. By following Conodoguinet Creek and crossing it, back and forth, you can visit 12 covered bridges in a distance of some 30 miles. All have Burr trusses.

One thing that has helped in the preservation of old covered bridges is the great interest that more and more people are taking in them. Covered bridge hobbyists have formed into societies and, in union, have been able to exert influence for the saving of many bridges. The oldest of these organizations, the National Society for the Preservation of Covered Bridges, was founded in New England in 1949. There are others: the Connecticut River Valley Covered Bridge Society and the Theodore Burr Covered Bridge Society of Pennsylvania are but two. With groups such as these and with the now generally-accepted fact that covered bridges are valuable tourist attractions, there is little doubt that a good number of these old bridges will be with us for a long time—not as practical and utilitarian structures but as picturesque and interesting links with the past.

Arbor Day at Kenmore

(From page 39)

living tree that will grow and mature as we do. . . .

"In closing," Mr Pomeroy said, "I would like to leave with you a quotation, taken from the portal of a park in Portugal."

Ye who would pass by and raise your

HYBRID RHODODENDRONS

Perfectly packed . . .
Perfectly sure to grow

54½¢ each

Sold in dozen lots only.
Mixed colors to give you
a riot of color in June.

1 Dozen \$6.50



Each of these sturdy plants is enclosed in its own wooden band which holds the earth firmly around the roots. Makes planting safe and easy.



The twelve plants come packed in this special mailing carton to insure arrival in perfect condition. Each plant is growing in its separate band.

Limited Supply

We cannot ship until all danger of frost is over (late in May) but be safe.

Order now from
this advertisement

Other rare varieties of Evergreens packed and shipped same way

AZALEA Here, extra showy scarlet, double Rosebud, dwarf, double blush-pink, extra hardy
Lorna, low dense, late double rose
Flame, huge single red, dwarf growing
Hinocrimson, a much improved, hardier Hinodigiri
Othello, large tall, brick-red, extra hardy
Delaware Valley, white, large, tall single
Palestrina, large double white, new

ABELIA grandiflora, pink-white all summer

BERBERIS Juliana, small yellow, spring, extra hardy

CAMELLIA SASANQUA (Hardy to Zone VI)

Cleopatra, semi-double rose, peony-type
Maidens Blush, single blush, very popular

COTONEASTER horizontalis, red winter berry, low

ILEX convexa, dwarf Japan Holly

ILEX OPACA female, berried American Holly

ILEX OPACA male, pistillate American Holly

JUNIPER pfitzer 6 ft. spreading

Andorra Fine Creeper

PIERIS japonica (Andromeda) white, April

PYRACANTHA Lalandi (Firethorn) orange berries

RHODODENDRON Hardy Hybrid Seedlings, mixed colors, June

TAXUS cuspidata (Spreading Yew) broad, low

Capitata (Upright Yew) tall pyramid

nana ("Brevifolia") dwarf yew

Hicksi, narrow column to 6 feet

1 Dozen, any one kind listed above..... **\$6.50** (Postpaid)

1 Dozen (6 each of 2 selections above)..... **\$7.00** (Postpaid)

Guaranteed live arrival in good condition • 50% credit on losses first year

KELSEY NURSERY SERVICE

Dept. D-6 • Highlands, N. J.



SPONSORED, IN THE PUBLIC INTEREST BY,
THE QUAKER OATS COMPANY

Quaker Puffed Wheat, Puffed Rice & Muffets . . . Quaker & Aunt Jemima Corn Meal & Crits
Quaker and Mother's Oats . . . Aunt Jemima Mixes . . . Ken-L-Products . . . Puss 'N Boots Pet Foods



TRAIL RIDERS OF THE WILDERNESS

1960 Expedition Schedule

QUETICO-SUPERIOR WILDERNESS, CANADA (Canoe Trip)

JULY 12 TO JULY 21
\$210 from Ely, Minnesota
Party limited to 18

HIGH UINTAS WILDERNESS, UTAH

JULY 12 TO JULY 22
\$230 from Vernal, Utah
Party limited to 20

SAWTOOTH WILDERNESS, IDAHO

JULY 19 TO JULY 29; AUGUST 2 TO AUGUST 12
\$230 from Ketchum (Sun Valley), Idaho
Party limited to 25

WIND RIVER MOUNTAINS, BRIDGER WILDERNESS, WYOMING

JULY 25 TO AUGUST 5; AUGUST 15 TO
AUGUST 26
\$250 from Pinedale, Wyoming
Party limited to 25

MAROON BELLS-SNOWMASS WILDERNESS, COLORADO

JULY 29 TO AUGUST 8; AUGUST 9 TO
AUGUST 19
\$230 from Glenwood Springs, Colorado
Party limited to 20

YELLOWSTONE NATIONAL PARK, WYOMING

AUGUST 8 TO AUGUST 19
\$250 from Moran, Wyoming
Party limited to 25

SAN JUAN WILDERNESS, COLORADO

AUGUST 16 TO AUGUST 26; AUGUST 30 TO
SEPTEMBER 9
\$230 from Durango, Colorado
Party limited to 25

TETON WILDERNESS, WYOMING

AUGUST 22 TO SEPTEMBER 2
\$250 from Moran, Wyoming
Party limited to 25

MT. WHITNEY-HIGH SIERRA, CALIFORNIA

AUGUST 24 TO SEPTEMBER 2
\$250 from Lone Pine, California
Party limited to 20

GILA WILDERNESS, NEW MEXICO

AUGUST 30 TO SEPTEMBER 9
\$250 from Socorro, New Mexico
Party limited to 20

PECOS WILDERNESS, NEW MEXICO

SEPTEMBER 6 TO SEPTEMBER 16
\$230 from Santa Fe, New Mexico
Party limited to 25

HORSEBACK TRIP IN THE GREAT SMOKIES NORTH CAROLINA

June 1 to June 11
\$200 from Asheville, North Carolina
Party limited to 20

This popular trip is provided for those who desire an Eastern horseback trip with a minimum of overnight camping. The Cataloochee Ranch on Fire Top Mountain, Waynesville, N. C. will be headquarters for seven daily rides to Sheepback Lookoff, Purchase Mountain, Paul's Gap, Balsam Mountain, and other interesting points in the Great Smoky Mountains National Park. In addition there will be a three-day pack trip from a base camp in the Park, including a ride to the crest of Mt. Sterling.

Make your reservations early and enjoy the superlative scenery, rushing waters, smoke-blue peaks and colorful blooms of laurel, iris, azaleas and dogwood.

Write or wire for detailed information, itineraries and reservations

919 Seventeenth Street, N.W.

Washington 6, D. C.

THE AMERICAN FORESTRY ASSOCIATION

hand against me, harken ere you harm me. I am the heat of your hearth on the cold winter nights; the friendly shade screening you from the summer sun; and my fruits are refreshing draughts quenching your thirst as you journey on.

I am the beam that holds your house, the board of your table, the bed on which you lie, and the container of your treasure. I am the handle of your hoe, the door of your homestead, the wood of your cradle, and the shell of your coffin.

I am the gift of God and the friend of man.

The program closed with a reminder: He who plants a tree, plants hope.

Ganges Cleanup Ahead of the Potomac?

(From page 23)

ened by the recommendations in the President's recent farm message that the amount of land in the Conservation Reserve and the Soil Bank be augmented through an orderly expansion up to 60 million acres and that more money be made available, Dr. Gabrielson said.

"This is a step in the right direction," he said, "and it is hoped that this marks the beginning of the end of the payment of subsidies for drainage, land clearing, and for other questionable practices which are unnecessarily destructive toward wildlife values and which also add to the over-all farm problem. . . ."

The speaker noted that "there has been a growing volume of criticism of the widespread use of the inadequately-tested and highly toxic poisons for controlling various agricultural, rangeland, and forestry pests." Calling for more treatment and less spraying, Dr. Gabrielson said that the Department of Agriculture is putting itself in the position of defending single purpose operations "so that it now appears that the department is interested in control above everything else, regardless of the effects on wildlife, human health, and other factors of our economy." Criticism of these programs will continue to grow, he predicted.

On the plus side, Dr. Gabrielson praised the administration for expansion of the Soil Bank and singled out Secretary of the Interior Seaton for special accolade for his "courageous and forthright action" in saving the Tule Lake National Wildlife Refuge from destruction at the hands of local water users. However, the secretary ought to build some fires in his own department,

ForestView Tandem TREE PLANTER

Easy, Low-Cost Planting of Evergreen Seedlings



AND TRANS-
PLANTS FOR
CHRISTMAS
TREES AND
REFOREST-
ATION

**FORESTVIEW
EVERGREEN NURSERY**
DEPT. AF GERMANIA, PENNA.

CUTTING TOOLS

for Weeds, Brush, Briars
LIGHT — EASY TO USE — RAZOR SHARP — SAFE

Also Heavier Models for Forestry Work

Write for FREE
Illustrated Folder



THE VICTOR TOOL CO
OLEY 464 PENNA.

When Writing Advertisers—
Please Mention
AMERICAN FORESTS Magazine

TEACHING CONSERVATION

By **WARD P. BEARD**

Assistant Director, Vocational Education,
U. S. Office of Education

Designed for

Conservation Workshops
Teacher Study Groups
Individual Teachers
Professional Foresters
Conservation Educators
Textbook Use

144 pages—Illustrated Price \$1.50
AFA Members Entitled to 10% Discount.

PUBLISHED BY
**THE AMERICAN FORESTRY
ASSOCIATION**

919 SEVENTEENTH STREET N.W.
WASHINGTON 6, D. C.

Dr. Gabrielson stated. Here he was referring to a long-awaited, long-range program for the Fish and Wildlife Service similar to Mission 66 and Operation Outdoors.

The fact that the Wilderness Bill seems to have encountered opposition in Congress was viewed with equanimity by the speaker, who observed that "it always takes time before the public begins to put its foot down on major conservation legislation to the elected representatives in Washington."

Honaunau Forest

(From page 18)

trees' rate of growth and very little about its variable production of scented heartwood. We do know that sandalwood is a parasitic plant and we know its hosts. Yet plantings made some years ago have not been successful. Sandalwood is an Hawaiian heritage, not a potential timber tree.

Koa grows on all the larger islands, but is used mainly on the island of Oahu. The lumber is made into bowls, trays, and furniture. Koa is a beautiful wood, brown, fine grained, and often lovely figured. We watch the logger cut the trees and wonder how much longer the stand will last.

In some areas the koa tree grows to great height with long straight stems. More commonly the koa is a big-butted, short-stemmed tree with a great umbrella of branching stems.

Fortunately, the koa seed coat is very hard. It has the ability to lie buried in the ground for many years and not germinate. When the ground is disturbed and the sun comes through, koa seedlings pop up by the thousands and grow quickly. Unfortunately the fine leaves of this leguminous seedling are avidly sought by cattle; a few nibbles and the tree is either pulled up or eaten to the ground. Insects and disease also take a great toll in the new koa stands.

In the Honaunau forest, after bulldozing for roads, koa seedlings popped up by the thousands. In two years, some of the seedlings are 10 to 15 feet high, and we are intently watching their progress. Knowing next to nothing about the koa's rate of growth, management, and silviculture, we cannot use this native tree as a base for a new forest industry.

Ohia is the most common tree on the island of Hawaii and the Honau-

(Continued on page 55)



The Smallest Effective Kit on the Market!

Weights only 1 1/4 oz. Contains 3 suction cups, knife-blade, antiseptic, lymph constrictor & easy instructions. Everything needed for suction treatment — the only first aid method approved by medical authorities. Works on insect bites, too!

If not available at your drug or sporting goods store, send \$2.50 cash, check, M. O. (no C.O.D.'s) to:
Cutter Laboratories, Berkeley, Calif. Dept. 0-55-1



6 Oz. Only 98¢



MINE SAFETY APPLIANCES CO.
54 Branches Everywhere
Home Office: Pittsburgh, Pa.

Perfect Ground Cover for Banks and Shady Places



MYRTLE (Vinca Minor)

A neat, sturdy creeping plant that stays green all winter. Blue flowers in May. Resists insects, disease and drought. Our big heavy clumps with 12 or more stems can be planted 2 ft. apart on level; 1 1/2 ft. on slopes. You cover big areas for little money.

100 BIG CLUMPS \$1500—1000, \$1200

**HARDY
EVER-
GREEN
IVY**

Baltic Ivy defies
dogs, children and
drought. Steep slopes,
sun or shade. Space 1 ft.
25 POTS, \$7.50
100 \$26.00

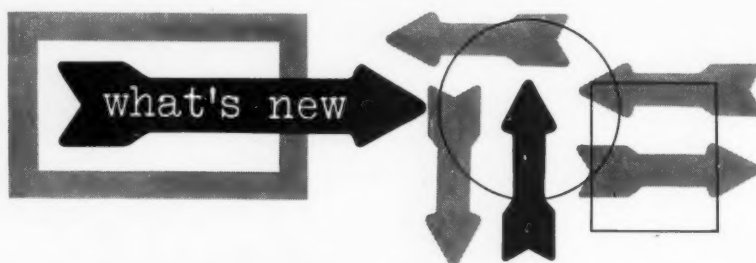


PACHYSANDRA

Thrives under trees and
in poor soil. Beautiful
shiny evergreen
leaves. Space 6
in. apart.

100 \$950
PLANTS,
1000, \$85

KELSEY NURSERY SERVICE
Highlands, N. J., Dept. D-5



FOR reasons of health, Ernest F. Swift has relinquished his duties as executive director of the NATIONAL WILDLIFE FEDERATION in order to concentrate his efforts on conservation programs of the organization. J. A. Brownridge, who has been with the federation since 1949, will serve as acting executive director. In another federation staff change, Charles H. Callison, conservation director and secretary since 1953, resigned to accept a position as special assistant to Carl W. Buchheister, president of the National Audubon Society.

The latest development in chain saws for heavy duty cutting is the **Titan Super 54 Direct Drive Chain Saw**. It has been designed to meet the ever-increasing requirements of the logging industry for better bal-



Titan Super 54 Direct Drive Chain Saw ance and more effective cutting power. The new saw is "Gyro-Balanced" for complete cutting control in high up-and-over throws, big timber felling, and other difficult felling and cutting jobs. Its balanced design reduces operator fatigue as well as assuring better control in the cut. Premium power is constantly available from the 7 cu. in. displacement engine. A pump-type, self-compensating carburetor assures continuous power in any operation. For further information write PROPULSION PRODUCTS COMPANY, South Milwaukee, Wisconsin.

A heavy-duty, tractor-mounted rake, which combines a rake, scarifier, and grader blade in one compact unit, has been introduced by YORK MODERN CORPORATION of Unadilla, New York. The new **Model RH York Rake** is designed to meet



Model RH York Rake

the growing demand for a heavy-duty maintenance and general construction rake for use on three-point hitch tractors. It combines three important, basic soil-working tools in a single compact unit . . . rake, scarifier, and grader blade. All three tools are designed for use as a complete assembly, but the scarifier and blade also are available as optional equipment.

Indian Fire Pumps are now available with fiberglass tanks. The D. B. SMITH & Co., Utica, New York, has announced that their **Indian Fire Pumps** are now offered with fiberglass tanks in addition to their gal-



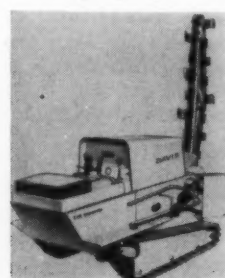
Indian Fiberglass Fire Pump

vanized and brass tank models. The **Indian Fiberglass No. 90 Fire Pump** has a 5-gallon capacity, is much lighter in weight, and will not rust or corrode. It is very strong and tough, and has been tested to take rugged treatment.

A comprehensive career guidance brochure entitled *What You Should Know About Career Opportunities Offered by the Pulp and Paper Industry*, has just been issued by the

TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY. The brochure is aimed at students and technical graduates in science and engineering and related fields. It outlines career opportunities in this, the country's ninth largest manufacturing industry. It is available from the TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY, 360 Lexington Avenue, New York 17, New York.

The golden anniversary of the U. S. FOREST PRODUCTS LABORATORY, oldest research organization of its kind in the world, will be observed June 2-4 at Madison, Wisconsin, where the trail-blazing institution was founded 50 years ago. Plans for the celebration, expected to bring hundreds of friends, "alumni," and well-wishers to Madison, are rapidly taking final form, according to Director Edward G. Locke. The pioneer laboratory was dedicated June 4, 1910, to a career of public service which, Dr. Locke pointed out, has yielded rich returns to both producers and consumers of a multitude of wood products.



Davis Trencher-Backfill

A new crawler-type trencher and backfill machine, the **Davis T-66**, is being introduced by DAVIS MANUFACTURING INC. The new trencher features positive traction, hydraulic variable speed drive, instant forward and reverse, and virtually effortless control of the complete trenching and backfilling operation. It digs 3" to 4" wide, down to 66" deep; or 12" wide, 30" deep; and at varying widths and depths in between

Honaunau Forest

(From page 53)

nau forest is no exception. Ohia is a pioneer tree on new lava flows and, as you would suspect, it is a scraggly, slow growing plant in this rugged environment. In other areas, ohia trees stand 125 feet high, limbless for 100 feet, and the fine tapered stems measure 30 inches in diameter at the base. Ohia lumber is a rich brown color, finely figured. Dry, it is so hard that neither nail nor bug can go through the lumber. Green, it twists, cracks, checks, dulls saws, and is most unpredictable. Yet we hope some day to learn how to use this tree. Observing that ohia is a very slow grower, we cannot predict a use for this tree in our forests unless it is used in a salvage operation.

Let us go from the very hard to the very soft. Tree fern is considered a timber tree in Hawaii. It is used by the florists in many ways, from supports for weak stemmed plants to a medium for root development. It is not uncommon to see tree ferns 35 feet high and 11 feet in circumference. Until recently we had little

hope for salvaging the tree fern in the Honaunau forest. Hawaiian Fern-Wood has started tree fern harvesting and hopes for a 10 year operation. Time will tell if this will prove profitable.

There are other trees in the forest. There are kopiko, kolea, ohe, alani, hoawa, hahalua, and many others. None of these trees is plentiful enough for a forest enterprise.

It may seem strange, but it is the trees from other lands that we are utilizing, since we know their rates of growth, potential qualities of the wood, initial survival of planted seedlings, and resistance to insects and diseases. We are acquainted with the root habits of these trees and with their ability to withstand high winds. We have seen these trees grow in many areas of Hawaii, and we can equate their usefulness for our many conditions.

Up to 1778, native plants grew in an island paradise. Isolated from continental diseases and insects, from grazing animals, and from man's

Forest Management

use the

HAGA ALTIMETER

and the

SPIEGEL-RELASKOP

Easy to check height, diameter of trees, basal area etc.

Topographic-, Degree- & Percentage scale. Scales self-adjusting for any slope. Built-in-rangefinder.

POCKET

ALTIMETER

BAROMETER

Registers anew every 3000 feet, easily readable scale. Weatherforecaster.

Ask for free literature:

WILLIAM A. WOLFF

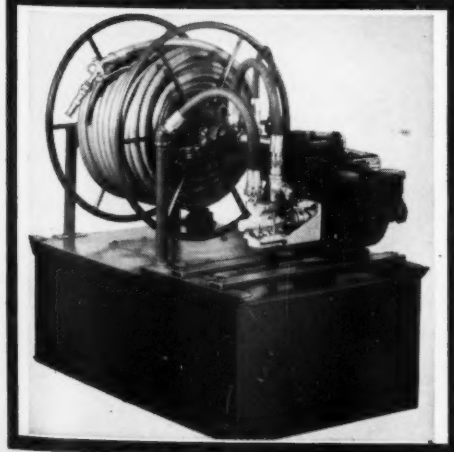
4051 Maybelle Ave.
Oakland, Cal.



FIRE FIGHTING OUTFITS

YOUR OWN FIRE "ENGINE," INSTANTLY AT YOUR COMMAND FOR FAST INITIAL ATTACK.

**U. S. FOREST SERVICE STANDARD
FOR PATROL CARS, 50 GAL. CAP.
(Larger Sizes Available)**



This Hard Hitting "One-Man" Outfit Is Adequate For Complete Control When Fires Are Still Small, Also To "Hold" Larger Fires Until Help Arrives. SIMPLE, RELIABLE, ECONOMICAL

MOUNT IT IN YOUR 1/2 TON PICKUP IN 15 MINUTES
Leaves ample space and load capacity for "working gear." Ideal for Foresters, Loggers, Patrolmen, Tree Farmers, Ranchers, Construction Bosses and similar field service, during fire season.

Developed in co-operation with the U. S. Forest Service to withstand constant rugged field service, without overloading vehicles. Designed for simplicity in operation and reliable performance. Made of best materials and first class workmanship. Larger sizes 100-500 gallon capacity available.

SEND FOR DESCRIPTIVE BULLETIN

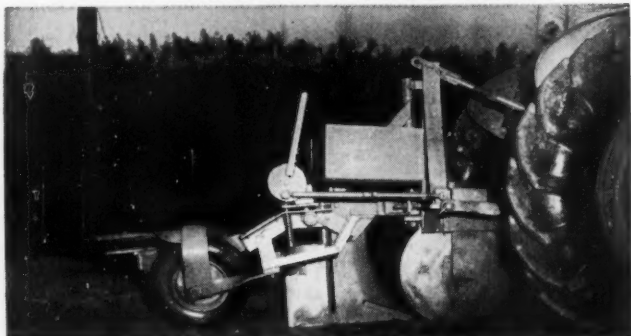
WESTERN FIRE EQUIPMENT CO.

Manufacturers of Forest Fire Equipment

69 MAIN STREET, SAN FRANCISCO 5, U.S.A. Branch: Portland, Ore.

FIVE YEARS IN THE MAKING

24 DIFFERENT MODELS OF PLANTERS NEW • IMPROVED • FIELD TESTED



THE WHITFIELD CONTOUR TRANSPANTER

MODEL 54-BA

The Ideal Machine for Contour Planting and Underplanting

We can supply planters for a maximum depth of 15"

R. A. WHITFIELD MFG. CO., Gordon Rd., Rt. 2, Austell, Ga.

CASH

FROM YOUR
IDLE
ACRES!

HOW TO GROW AND SELL CHRISTMAS TREES

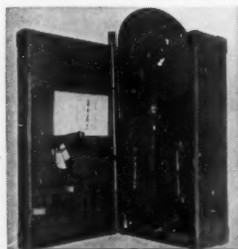
By James E. Lawrence

Here's the book that covers every detail of Christmas tree farming. Tree farmers from Maine to California acclaim it "the most complete, practical guide on the market." Contains 175 pp., profusely illustrated with photographs and drawings. \$2.50 postpaid.

OUTDOOR PUBLICATIONS

402 CHESTNUT ST.

ITHACA, NEW YORK



Metal Detector Save Machinery!

Stop the Accident Before It Happens

SCR-625 METAL DETECTOR

Recommended by U. S. Forest Service and in numerous articles for finding concealed metal in logs and timber products. The Dantzler Lbr. Co., Perkinston, Miss., reports an estimated savings of \$5,000 to \$6,000 yearly. Write us for copy of free report of U. S. Forest Service.

The SCR-625 is a portable instrument which may be used in the field to give an audible indication of buried metal in logs, underground, or in water. It may also be connected permanently with suitable automatic control devices for stopping machinery should imbedded metal in logs be encountered.

Detector is shipped in handy portable carrying case with instructions and ready to operate except for batteries. Ship. wt. 55 lbs. Our set—\$6.27. Special price to quantity users or dealers upon request.

We maintain service and parts of the SCR-625. Parts price list on request.

Used Metal detectors \$39.50

ESSE RADIO COMPANY

42 W. South Street

Indianapolis 25, Indiana

Phone: Melrose 4-8328

MEMBERSHIP APPLICATION

THE AMERICAN FORESTRY ASSOCIATION 919 17TH STREET, N. W., WASHINGTON 6, D. C.

Please enroll me as a Member of The American Forestry Association. Enclosed find \$6.00 to cover dues for one year, (Including subscription to AMERICAN FORESTS Magazine). My name and address is:

Name _____

Street _____

City and State _____

destructive forces, plant life evolved unhampered by frequent plant and animal invasions. There was no stimulus to evolve protective devices. After 1778, the white man brought in the cow, horse, goat, sheep, and deer and turned them loose. He brought in the iron axe and the plow, and he used fire to clear the forest for pasture. As a consequence, in less than 100 years the watersheds were partially denuded. Floods, soil erosion, and less drainage into the underground basins resulted. Water is vital to sugar; by 1900 sugar had become the islands' biggest crop. It grew best where it was irrigated. Less water meant less sugar. Denuded watersheds spelled less water.

Scientists, foresters, and plant specialists were sent to all parts of the world and brought back thousands of species of plants for the watersheds. Records were kept concerning their progress, so that today we have a great fund of information about these exotic plants. Some of these introduced plants have proved to be excellent timber trees.

About 30 years ago, the trustees of the Bishop Estate, owners of the Honaunau forest, sold the koa to Mr. Mootoka and later to Mr. Take-moto. Instead of taking a stumpage price, they asked the logger to plant, each year, in a selected area, 1,000 tree seedlings, which from time to time looked promising. Starting in 1925 and continuing through 1945, these plantings plus observations elsewhere serve as the basis for a timber program in this forest.

As you might suspect, Japanese sugi pine was the first species planted. Our Japanese logger planted the first seedlings much too far apart, and today these sugi trees are short and heavily clothed with many limbs. The stocky stems have great flaring butts that measure five to six feet in diameter at the ground, while at 10 feet above the ground the trunks are 12 to 18 inches in diameter. In another sugi planting, 10 years old, the trees are six feet apart, self-pruned, and the long stems of relatively uniform taper could now be used for poles.

In 1927 and 1928, 1,000 coast redwood trees were planted, 10 to 14 feet apart. The soil was about a foot deep and overlaid pahoehoe. The trees grew very slowly. For seven years the logger had to spend many tedious hours chopping out the weeds and vines that threatened to inundate the young trees. After reaching a height of 12 feet or so, the redwood trees grew rapidly. In 1959 we

counted 436 trees; their diameters measured 10 to 32 inches and heights ranged from 80 to 125 feet. Perhaps we should thin this plantation, but this brings up the problem of wind-throw.

It is seldom windy in Kona. Yet a windstorm in 1959 toppled some of the large trees for the first time. We suspect that the redwoods have grown too large and too heavy for this soil condition.

Redwood does not look promising for Kona's forests. It grows too slowly during its youth and lacks wind-firmness. Yet a test of the wood, made at the Forest Products Laboratory, shows that our trees equal those of California's second-growth stands. Redwood remains somewhat of an enigma.

Ash is no enigma. Our ash comes from Mexico. Its scientific name is *Fraxinus uhdei*.

Of the 1,000 ash trees planted in 1928 and 1929, 980 were growing in 1957. Planted about 12 feet apart, the plantation stems measure four to 32 inches in diameter and stand about 80 feet high. Perhaps we should have thinned the stand 10 years ago. Yet moisture is not a limiting factor, but we are wondering if perhaps sunshine might be.

From our 980-tree plantation, we


have logged 20 trees. The wood was sent out for test and proved good. Mill runs and field studies indicate a yield of 16,000 to 30,000 board feet per acre within a span of 30 years. We feel that we can top this. One ash tree, 29 years old, was cut into 1,000 board feet of lumber.

We are now planting about 100 acres of ash a year. The first planting, one and a half years old, stands 8 to 12 feet high.


Another fine tree for our forest is the Australian red cedar. This hardwood is closely related to the cigar box cedar of South America. Our 22-year old trees stand 90 to 115 feet high, with diameters measuring 10 to 22 inches.

Cedar is a fast-growing tree; using 10- to 12-inch high seedlings, the planted trees soon top the weeds. The biggest advantage of cedar is its buttressed roots. These great flaring roots support the tree when it grows on shallow soils. Recent wood tests have proved the excellent quality of this wood, which has a great variety of uses.

Eucalyptus saligna, sometimes called flooded gum, grows almost too quickly. One tree in the Honaunau forest, 22 years old, stands 160 feet high without a branch for 110 feet,



Precious Seconds!



Men who fight forest fires agree that every second is precious—priceless, in fact.

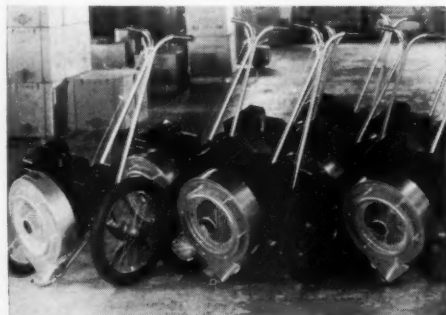
And when it comes to towers, they agree again. As they discuss strength, weather-resistance, engineering know-how and ease-of-assembly, the name, Aermotor, always comes first.

"In Observation Towers, the Standard of Excellence Since 1888"

AERMOTOR COMPANY
2500 W. Roosevelt Road • Chicago 8, Illinois

A GOOD IDEA IN FIRE FIGHTING . . .

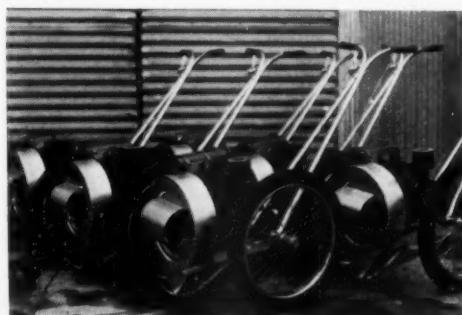
Lo-Blo, the Air Broom saves time, labor, money, sweat and tired muscles.



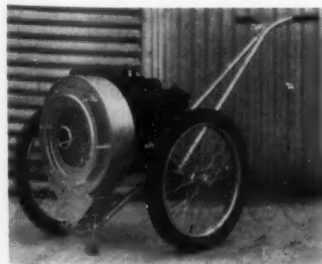
TEN 5 $\frac{3}{4}$ hp Lo-Blo FOREST MODELS
shipped in March 1960 to North Carolina Dept. of Conservation & Development



This 3 hp Lo-Blo weighs but 65 lbs.



SIX 3 hp Lo-Blo FOREST MODELS
shipped to Missouri's State Conservation Department



The 5 $\frac{3}{4}$ hp Lo-Blo weighs 93 lbs.

The rotor fan sends a terrific blast of air scooting low across the ground at more than hurricane force, clearing everything in its wide path. Thoroughly proven in fire fighting, they are versatile machines for quick clean-up chores of all kinds in forestry and maintenance. Write for free copy of Bulletin 725 "AIR BLAST LINE BUILDING" prepared by University of Missouri Agricultural Experiment Station. Describes, pictures their complete tests.

ATWATER-STRONG CO. Atwater, Ohio Phone Whitehall 7-2344

FOR BETTER TIMBER CROP

plant

Pikes Peak Nursery

Seedlings and Transplants

SCOTCH PINE

(Pinus sylvestris)		Per 100	Per 1000
(2-0), 2 yr., S.,	2 to 3 ins.		7.50
(2-0), 2 yr., S.,	4 to 6 ins.	2.75	17.50
(3-0), 3 yr., S.,	8 to 15 ins.	4.25	27.50
(2-2), 4 yr., T.,	10 to 18 ins.	6.00	40.00
(2-3), 5 yr., T.,	12 to 24 ins.	8.25	55.00

WHITE PINE

(Pinus strobus)			
(2-0), 2 yr., S.,	4 to 6 ins.	3.00	20.00
(3-0), 3 yr., S.,	5 to 10 ins.	4.50	30.00
(2-1), 3 yr., T.,	3 to 6 ins.	6.75	45.00
(2-2), 4 yr., T.,	6 to 14 ins.	8.25	55.00

COLORADO BLUE SPRUCE

(Picea pungens)			
(2-0), 2 yr., S.,	3 to 6 ins.	3.75	25.00
(3-0), 3 yr., S.,	4 to 8 ins.	6.75	45.00
(3-0), 3 yr., S.,	6 to 12 ins.	8.25	55.00
(2-2), 4 yr., T.,	6 to 10 ins.	12.00	80.00

NORWAY SPRUCE

(Picea abies)			
(2-0), 2 yr., S.,	4 to 6 ins.	3.50	22.50
(3-0), 3 yr., S.,	8 to 16 ins.	5.25	35.00
(2-2), 4 yr., T.,	8 to 15 ins.	9.00	60.00
(2-3), 5 yr., T.,	10 to 20 ins.	12.00	80.00

DOUGLAS FIR

(Pseudotsuga taxifolia)			
(2-0), 2 yr., S.,	4 to 7 ins.	4.25	27.50
(3-0), 3 yr., S.,	5 to 12 ins.	6.75	45.00
(3-2), 5 yr., T.,	8 to 14 ins.	12.00	80.00

CANADIAN HEMLOCK

(Tsuga canadensis)			
(2-1), 3 yr., T.,	4 to 6 ins.	10.50	70.00
(3-1), 4 yr., T.,	5 to 12 ins.	12.00	80.00

WHITE FLOWERING DOGWOOD

(Cornus florida)			
(2-0), 2 yr., S.,	12 to 18 ins.	7.50	50.00
(3-0), 3 yr., S.,	24 to 30 ins.	12.00	75.00

**Order Now
for
Spring Planting**

We also have a large selection of Ornamentals, Shrubs, Shade Trees, Flowering Trees and Nut Trees. Special Discount to—Landscapers, Licensed Dealers and Nurserymen.

Write for Free Catalog or Call:
Hopkins 5-5696



Pikes Peak Nurseries

Quality Nursery Stock For More Than 35 Years

801 WATER STREET INDIANA 4, PA.

and has a dbh of 24 inches.

There are other trees, over 32 species, in our forest—tallowood, red mahogany, Chinese fir, turpentine tree, gum myrtle, jhalna, and paperbark (a dismal failure). Most of these trees grow well but do not compare favorably with ash, cedar, or flooded gum.

We have recently planted loblolly and Monterey pine. Pigs relish the resin from these trees; when not pig-bothered, loblolly and Monterey pine grow fast. We are also trying Queensland maple, an excellent timber tree found growing on the island of Oahu. Nepal alder has been planted in the swamp lands, where the grass stands 5 feet high. A year after planting, some of the alder trees stand 12 feet high. Alder is an excellent furniture wood.

We will continue to plant new species of promising timber trees, but for the present, we will depend on ash, cedar, and flooded gum. We are making a side bet on Queensland maple and Nepal alder.

After determining the best species, and temporarily ignoring the native forest trees, we next had to find out how much a changeover of the forest would cost. In 1958, we cleared 110 acres of jungle and planted about 400 ash trees per acre. This cost us about \$35.00 per acre. The second years' clearing and planting costs were a little higher. We now feel that we can clear and establish a new forest cover for about \$40.00 per acre.

Maintenance is no problem in most areas. Vines sometimes strangle the trees, but these pests can be controlled. Fortunately, fire is not a serious threat as the forest is too wet to burn, even in the driest of years.

Our next problem is how much we should clear and plant each year. We tailored our forest clearing and planting schedule to about six million board feet of annual cut, a

workable unit for a high quality but average size hardwood mill. This annual cut will require clearing and planting 160 to 180 acres a year, at a cost of about \$9,000. In 30 to 35 years, we expect a return of about \$200,000 from the sale of mature trees. This high-quality hardwood lumber will be used in our furniture shops, lumber yards, and craft trades—and some will be made into veneer.

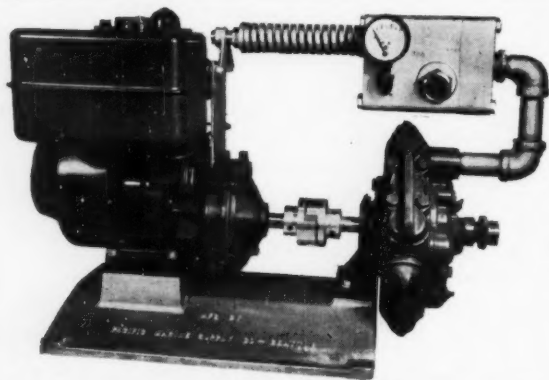
It all looks good, but there are still many problems. First, we must work toward a selection of seed from trees of good quality wood, fast growth, and long, clean boles. We do not know how close we should plant our trees. We do not know at what age we should thin our plantations, nor do we know if this will be necessary. We do not know the best age at which to cut our trees. We do not know if a pure plantation is better than a mixed plantation. The problems make us hesitant but the results so far make us feel optimistic.

We will not forget our native koa and ohia trees. Research will eventually give us the answers to these trees and will also tell us more about the non-native trees.

We know we must have cover on our hills to catch and protect the water resources for our fast-growing island population. We believe we can use the watersheds for timber, and perhaps through research, proper management, manipulation of species, get more water into storage.

We are going ahead on a timber program. Some day, perhaps, we can ship some of this fine hardwood to the Pacific Northwest, the area from which now comes most of our lumber.

ABOUT THE AUTHOR—Norman K. Carlson is a graduate of the University of California where he received BSF and MFS degrees. He is presently employed by the Bernice P. Bishop Estate as a land development specialist.



A New PACIFIC Pumper —FOR PUMPING ABRASIVES

New in Pacific's long established, complete line of standard pumps, compact Model BW weighs only 70 lbs and is designed for ground application of abrasive fire-retardant slurries, such as used by the U.S. Forest Service. Equipped with a pressure controller unloader valve enabling operator to control pressure to any desired setting. This allows engine to operate freely, assuring long pump and engine life.

Rated Performance:

Pressure	50	100	150	200	250	300	Normal Operation:
G.P.M.	10	9	8 3/4	8 1/2	8	7	8 GPM @ 250 PSI

Write for catalog on our complete line of light weight portable pumps and related forest fire fighting equipment.

PACIFIC MARINE SUPPLY CO.

1223 Western Ave.

Seattle 1, Wash.

Gov. Rockefeller Calls for a Huge 75 Million Dollar Parks Program

A 75 million dollar bond issue for the acquisition of park and recreation land for New York State was proposed on March 12 by Governor Rockefeller.

The ambitious program is the result of a study by the New York State Conservation Department headed by Commissioner Harold G. Wilm. Assistance was also provided by Robert Moses, chairman of the State Council of Parks, who was highly praised by Wilm for his contribution.

Mr. Wilm said the survey showed that the state is short of almost every kind of recreation facility necessary to meet the needs of the present population. He said the urgent need is for recreation areas within 40 to 50 miles of large urban and suburban populations.

Mr. Moses said it is obvious to every intelligent citizen that "land, particularly open land near urban centers suitable for park use, must be acquired *right now* without fatal delay or postponement." He warned that "there is no cheap easy solution," and added, "there is no time left for debate."

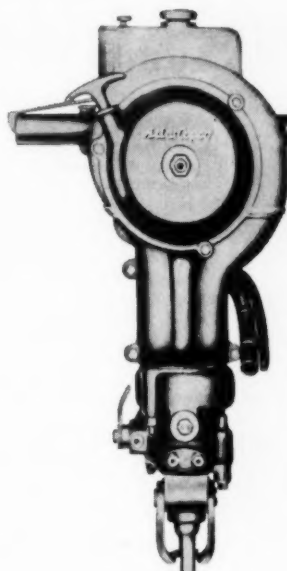
The parks program, the most ambitious in the state's history, gives the President's national Outdoor Recreation Resources Review Commission a tremendous "shot in the arm," and will unquestionably give other states a worthy model to emulate. The New York State survey carries its projections to the year 1976, the year to which the ORRRC is also carrying its recreation needs projections.

Increased recreation demands are due to four principal reasons, the survey shows: 1) the increase in leisure time; 2) the growth in popularity of hunting, fishing, camping, and boating; 3) the family vacation; and 4) the increased mobility provided by automobiles and super-highways, accompanied by the advent of the trailer-drawn pleasure boat.

State parks in New York are over-crowded, and officials have been deluged with complaints from families that have been obliged to wait as much as three days by the roadside to gain admission to the public campsites. Public access to many rivers and lakes is either totally lacking or entirely inadequate to accommodate the demands of an incredible fleet of 600,000 pleasure boats in New York State alone.

In moving to meet this growing clamor for action by New Yorkers, Governor Rockefeller recalled that exactly 75 years ago the state pioneered in the establishment of the Forest Preserve, which was followed by the creation of an outstanding system of state parks, state reforestation programs, and other far-seeing conservation developments.

"In the years to come the people of our state should not be forced to look elsewhere for their outdoor recreation," Governor Rockefeller said.



Now! Get
ON-THE
SPOT
DRILLING
POWER
... with
Atlas Copco's
COBRA
!

World's lightest motor drill!



Here's a drill you use to fill in on those jobs where cost, terrain, or time prohibits sending out a compressor crew. Weighs just 53 pounds; easily carried by one man. Completely self-contained with gasoline engine that drills 50-60 feet of hole on a tankload (2 qts.) of fuel. Drills in any position up to 45°. Perfect for light drilling anywhere. Write for complete literature. Address: Dept. AF-9.

- One-man operation!
- One-man carry; piggyback rig available!
- Easy starting—any weather, any altitude!
- Multi-use flexibility!
- **ECONOMICAL**—Less than 9¢ per foot, including gas, oil, drill steels and maintenance, in actual forest service use.

Atlas Copco

545 Fifth Avenue, New York 17, N. Y.

610 Industrial Avenue
Paramus, New Jersey

930 Brittan Avenue
San Carlos, California



CRESTMONT INN

For You, Your Family

Take your vacation at this perfect spot atop the Allegheny Mountains. Days are warm, nights refreshingly cool.

Swim, boat, canoe in the large natural Lake of the Eagles. *Ride or hike* along picturesque wooded trails, quiet country roads. *Play tennis, lawn bowls, shuffleboard.* Try your golf skill on the new pitch and putt course. (There's a beautiful regular course, too.) Golf and tennis pros are available for your instruction. *Enjoy concerts, dances, movies* in the evenings. Choose as many activities as you wish—or just relax and look at the view from a long wide porch. *Children of all ages are welcome.* Programs and directors for tots and teenagers.

Modern rooms and cottages, delicious meals, informal atmosphere—all geared to your comfort and pleasure.

Make yours a perfect vacation. Make it a vacation at Crestmont Inn.

**Opens June 17—write for folder
CRESTMONT INN, Eagles Mere, Pa.**

W. T. Dickerson, President

REAL ESTATE WANTED

We have buyers attracted from the Greater Philadelphia Area and the Northern and Southern States that are interested in

**TREE PLANTATIONS, TIMBERLAND, NURSERIES
FARMS and COMMERCIAL PROPERTIES.**

We personally inspect your property and bring prospects by auto and airplane at no expense to you.

Write or phone for full information and get quick results.

Thus far in 1959, we have succeeded in selling 9 CHRISTMAS TREE FARMS and 2 large tracts of TIMBERLAND. The Buyer's and Seller's names are given upon request. Bank References. Bonded Realtor.

LEE MANLEY

"The Land Specialist"

Office at Thorndale, Pa.

Phone: Coatesville 0767

MARK YOUR CALENDAR!

Plan To Attend

85TH ANNUAL MEETING

THE AMERICAN FORESTRY ASSOCIATION

EDGEWATER GULF HOTEL

EDGEWATER PARK, MISSISSIPPI

OCTOBER—16-19, 1960

On the Consolidation of Resource Departments

(From page 32)

forest, park, and public relations purposes than any other consequences of the consolidation. It was under these circumstances that I was lent by the Ohio State University to the new department to become chief of its Division of Wildlife and to attempt to mold this division into a working partnership with the other divisions.

After five years in this position, I returned to the University where, in my present post, I have maintained liaison with the department and with other agencies operating in the state as part of my official duties.

Upon this background, an effort will be made to appraise the merits of state resource department consolidation.

The need for consolidation appears to exist. There is already a multitude of separate agencies dealing with natural resources in all states which do not have consolidated resource departments, and more are being created annually. This is true of the states in the Connecticut River Valley area. It is particularly true, it should also be noted, in the federal government, where at least three agencies concern themselves with soil resources on private farms, four are concerned with forestry, three with wildlife, three with recreation, two with flood control, two with land restoration, and four or more with water resources.

Proponents of resource agency consolidation have advanced many arguments in its behalf. One example is the following quotation from a statement to the West Virginia Jaycees meeting last October 18:

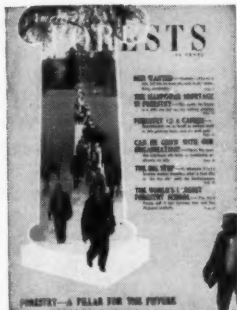
"The benefits derived from such a reorganization will:

1. Permit the wise use of West Virginia's natural resources for the present and future citizens of West Virginia.
2. Obtain maximum benefits from minimum budgets and be more economical.
3. Eliminate public confusion and provide more and better service for the tax dollar paid by the taxpayer.
4. Separate resource management and politics to a greater degree than is possible under the present system."

Among the favorite points advanced are: economy, improved pub-

A CAREER REPRINT FOR PROSPECTIVE FORESTERS

Second Edition, Enlarged to Include
Forestry Scholarships Available in
Forestry Schools



The Campaign of The American Forestry Association to encourage outstanding young men to adopt forestry as a career has resulted in the publishing of a 46-page Career reprint, containing among others the following articles from **AMERICAN FORESTS Magazine**:

MEN WANTED

THE MANPOWER SHORTAGE IN FORESTRY

FORESTRY AS A CAREER CAN HE GROW WITH OUR ORGANIZATION?

THE BIG STEP

THE WORLD'S LARGEST FORESTRY SCHOOL

AVAILABLE SCHOLARSHIPS

Copies of this Reprint are now
available at the following
prices:

- 1- 24 copies—50¢ Each
- 25- 49 copies—45¢ Each
- 50- 99 copies—40¢ Each
- 100-499 copies—35¢ Each

We will provide special quotations,
on 500 or more copies.

THE AMERICAN FORESTRY ASSOCIATION

919 17TH STREET, N.W.,
WASHINGTON 6, D. C.

lic services, achieving balance in programs, providing for equality among personnel, achieving a stronger voice in raising funds and in legislative programs through a united front, providing insulation to personnel and individual divisions against local pressures, special interests, and political interference, thereby improving morale; pooling of talent to provide services which could not otherwise be provided.

Opponents have their arguments, too. Some of those commonly advanced are: loss of identity in a large organization, risking loss of earmarked funds, loss of program control, undesirable insulation from the public, failure to effect real economy, and co-ordination's being better achieved by leadership than by direction.

Time does not permit examination of each of these arguments in detail but I would like to draw from our experiences in Ohio and observations of organizations in other states to comment on some of them.

It is often argued that economies can be effected through consolidation of resource agencies by joint use of facilities, equipment, and personnel. This is hardly a subject for argument as it is being done in a number of states. The Michigan Department of Conservation, for example, has a Division of Field Services which for many years used a single staff to enforce all conservation regulations and to carry out forest fire control programs for the entire department. Oregon has carried the co-ordination of the enforcement function to the point where the state highway patrol enforces fish and game laws. In virtually every unified department of natural resources, a single business office handles all the accounts, disbursements, and personnel records for all divisions. This consolidation makes possible effective use of the expensive labor-saving business machines which characterize a large establishment.

It would appear from this brief review that economies are to be expected from consolidation. The record, however, does not bear this out; the total expenditures for most, if not all, consolidated departments are usually not less than the sum of the operating expenses of the single agencies from which they were created but rather are generally much higher. This may be attributed at least in part to enlarged programs and improved public services. In our own state, while total operating costs are much greater, there is

**Poison Ivy
grows
where
your men work.**



**THEY CAN'T
AVOID IT!**

**BUT AQUA IVY TABLETS
CAN MAKE THEM IMMUNE TO
POISON IVY, POISON OAK!**

Poison ivy (called poison oak in many areas) grows in almost every state, in most rural areas. That's why your men can't avoid exposure.

And that's why Aqua Ivy's immunity makes so much sense. Immunity means protection-from-within, protection that your men carry with them wherever they work. Not a lotion or an ointment, but an easy-to-take tablet, Aqua Ivy's protection lasts up to 12 months.

Aqua Ivy AP® Tablets are safe — no harmful side effects. And they work — proven effective in 95% of cases.

Available in an economical, industry-sized bottle containing 1,000 tablets. Thus, for just a few dollars per employee, you can provide your men with season-long immunity! (And this cost is invariably saved many times over in reduced absenteeism.)

REMEMBER: It takes time to build full immunity. So order Aqua Ivy Tablets now, before the poison plant season starts. Available through your regular drug channels in the United States and Canada.

YOURS FREE: For distribution to your men, quantities of Aqua Ivy's informative booklet "Facts You Should Know About Poison Ivy and Poison Oak". Also a "Poison Plant Recognition Poster" to tack on bulletin boards.

DEPT. AF-1
SYNTEX CHEMICAL COMPANY, INC.
P.O. BOX 117, NEW YORK 11, N. Y.
Please send _____ Free booklets and _____ posters.

Company Name _____

Street Address _____

City _____ Zone _____ State _____



Shorter barrel for better balance, and easier trigger pull, are two easy-to-see improvements in this latest version of the famed Nel-Spot Tree Marking Gun. Try it, and you will appreciate these others:

3. Smaller piston and cylinder to use even less paint.
4. Two piece piston rod—time saver on repairs.
5. Larger nozzle sizes (.025 and .030) now optional.

And for top efficiency and economy, use this improved gun with Nelson's non-setting money-saving Tree Marking Paint.

ORDER FOR TRIAL—OR WRITE

THE NELSON COMPANY

Iron Mountain, Michigan (Box 349)
Montgomery, Alabama (Box 1892)

PLANTING TREES ?

Use a "FORESTER" or "CONSERVATOR" Planter



Complete Information
on request

UTILITY TOOL
& BODY CO.

Clintonville, Wis.

clearly an increase in certain programs and services. One example is a greatly enlarged public relations program made possible through the pooling of funds for the hiring of personnel and acquisition of reproduction equipment. A whole battery of multilith equipment now clicks away 24 hours a day turning out everything the department wishes published from duck blind permits to complex seven-color soil maps.

Whether or not this means economies have been effected depends on one's point of view. I do not recall that any personnel were freed for other tasks, equipment made available for other purposes, or room found in already occupied facilities through creation of a unified Department of Natural Resources. I do know that personnel were added in every division, much new equipment was acquired, and facilities were greatly expanded. I am certain, however, that service to the public has been increased materially and that the weighted unit cost of these services is probably somewhat lower than that provided by separate agencies.

The need for co-ordination of the many diverse resource programs is often advanced as a reason for consolidation. We can see many examples of apparently conflicting governmental programs at both state and federal levels. Separate federal programs to drain and to impound pot holes, to reclaim new land for crop production by irrigation while encouraging farmers to reduce crop acreage on other lands by cash subsidies are examples. At the state level, we may see one agency of government aiding in the construction of reservoirs exclusively for water supply while another agency seeks special appropriations to construct recreational waters in the same area, and as many as three or four agen-

cies may be engaged in some form of reforestation on public lands.

There appears to be much merit in co-ordinating agencies so that conflicts are resolved. I would raise some questions concerning co-ordination.

Former Senator Pepper of Florida was once credited with saying, with respect to a proposed reorganization of the conservation agencies in his state, that what was really meant by the proponents was that they wanted to change the department from his politics to their politics. Co-ordination which has as its objective providing the means by which separate agencies may work together to better accomplish their individual objectives is a desirable goal. Co-ordination which is aimed at attaining the goals of a single group of persons through separate agencies and at their expense is something else.

I am strongly opposed to proposals which consolidate groups of agencies so that the resources of those which enjoy favorable public and financial support may be used to enhance those lacking such support. This, to my way of thinking, is an action which circumvents public will and perpetuates mediocrity. There is evidence that this is sometimes a consequence of, if not an objective of, such consolidation.

I have witnessed it in our own state through efforts to tap fishing and hunting funds to support purposes for which the General Assembly consistently refused to appropriate money. The most obvious of these is public relations as distinguished from education. A quick perusal of the financial statements of conservation departments across the country indicates that this is commonplace.

Seldom is it necessary or desirable to achieve co-ordination through directives. Agencies, like the individuals of which they are composed, are

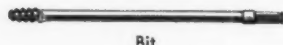
SWEDISH INCREMENT BORERS



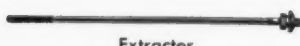
Increment Borer
ready for use



Handle



Bit



Extractor



Increment Borer when not in use

The Swedish Increment Borer is by far the best instrument yet devised to determine the characteristics of standing timber. It is extremely light, small in bulk, handy and portable. It makes the smallest possible hole consistent with the purpose of boring; and materially reduces the expense of boring. It makes for accuracy in observation, since the cores obtained with it are exact and permanent records which may be examined at leisure under the best conditions. No skill is required to operate it.

These increment borers are being used by the Federal and State Forest Services, lumber companies, telegraph and telephone companies, creosoting companies, etc.

SWEDISH INCREMENT BORERS.

Length of Bore	Instrument Complete each	Bit only	Extractor only
2 1/4 in.	4330 1/2 \$15.35	4330 1/2 B	4330 1/2 E
4 in.	4331 1/2 18.35	4331 1/2 B	4331 1/2 E
6 in.	4332 1/2 21.75	4332 1/2 B	4332 1/2 E
8 in.	4333 1/2 24.95	4333 1/2 B	4333 1/2 E
10 in.	4334 1/2 28.15	4334 1/2 B	4334 1/2 E
11 1/4 in.	4335 1/2 31.35	4335 1/2 B	4335 1/2 E
13 1/4 in.	4336 1/2 34.55	4336 1/2 B	4336 1/2 E
15 1/4 in.	4337 1/2 37.85	4337 1/2 B	4337 1/2 E

Prices cover delivery in U.S.A.

BARTLETT MFG. CO. 3019 E. GRAND BLVD., DETROIT 2, MICH.

more apt to want to work together if they are made to see the need for consolidation and the advantages it holds for them. What is needed then is legal machinery through which agencies can work together and leadership which works at achieving this end. This could be a goal of a consolidated department. It could also be the goal of an appropriately authorized co-ordinating commission or a voluntary meeting of the heads of independent agencies. It might even be achieved and, I expect, is achieved to some degree in some states, through private organization. Californians are considering a proposal to establish a secretariatship in the governor's office for natural resources. The governor would in this way establish co-ordination between agencies without disturbing their identities or consolidating them into a single huge department.

A major consideration in department consolidation is the risk of bringing performance of all divisions down to the lowest common denominator through loss of initiative. I feel that some competition between agencies is healthy. Co-ordination achieved through coercion to conform can stifle initiative—this is something we guard against in our economic life, and we should be careful about it in government, too.

There is no merit, I believe, in the argument that consolidation provides a basis for balancing programs so that one area of interest does not get more attention than another. This is like borrowing from the labor movement and applying it to resource management. There are valid differences in need and in public support for different resource programs. Agencies which enjoy such support should be encouraged to hold it—those looking for it, if deserving, should be helped to get it. We should not apply the principle of breaking up the Yankees to improve baseball to resource agencies.

Employees in separate resource agencies have sometimes looked to consolidation as a way to gain equity in salary with persons with comparable training and responsibility in other agencies. This is a valid argument. The fact that it has been attained is probably one of the reasons that the total cost of consolidated agencies is often greater than the sum of the separate agencies. In Ohio, for example, a reclassification of all positions in the new department was effected resulting in the elimination of many inequities and a general up-grading of salary levels.



A BETTER
PUMP
BY....

FEDCO

SMOKECHASER OUTFIT MODEL N

- 1 Comfortable, easy pack, it "fits"
Shoulder straps will not rope or twist
- 2 Maximum water capacity—5 gallons
Minimum weight—dry 4½ lbs. Service weight 46 lbs.
- 3 Strong, corrosive resistant bag
Neoprene rubber coated nylon fabric
- 4 40" hose and ball bearing hose connectors interchangeable with FS model
- 5 Standard Fedco pump with positive shut-off interchangeable with FS model

A FEDCO EXCLUSIVE

Fedco Smokechaser outfits can be filled from a small remote water seepage using the standard Fedco pump at the rate of one gal. per min.



DEALER INQUIRIES INVITED

FIRE EQUIPMENT DEVELOPMENT CO.

829 Estabrook St. San Leandro, California
Distributed in Canada by
CANUS EQUIPMENT LTD. OTTAWA, ONTARIO

***20
MILLION
TREES
A YEAR!**

***NOW OVER 35 MILLION!**



Write for Catalog..

WITH WHOLESALE PLANTING LISTS. ASK
FOR OUR FAMOUS CHRISTMAS TREE
GROWERS' GUIDE

MUSSER TREES...

Make Better Timber Crops!

Prime timber begins with the seed. With Musser you are assured of Good Heredity characteristics through careful selection of seed. With Scientific Culture in Musser nurseries the seedlings develop the strong, extensively branched, compact root system necessary for extracting the most food from the soil of the planting site.

Musser offers the largest selection of quality trees at a price made possible through large quantity production.

Here are a few of the items listed in our catalog:

SPECIAL STRAIN SCOTCH PINE

Per 1000
Very best Christmas tree strain, from seed collected by our men from selected parent trees. Healthy, sturdy, straight-stemmed. Also all other best strains Scotch Pine.

2-yr. Seedlings, 3 to 6 ins.\$25.00
2-yr. Seedlings, 5 to 10 ins. 35.00

AUSTRIAN PINE—Austrian Alpine Stock

2-yr. Seedlings, 3 to 6 ins.\$25.00

NORWAY SPRUCE—Special Strain Fast Growing

Fine for Christmas Trees, Ornamental and Timber.

2-yr Seedlings, 5 to 10 ins.\$35.00

DOUGLAS FIR—Hardy

2-yr. Seedlings, 4 to 8 ins.\$25.00

3-yr. Seedlings, 8 to 12 ins. 55.00

Many other Evergreens—Hardwoods—Ornamentals—Shade Trees

MUSSER FORESTS, INC.

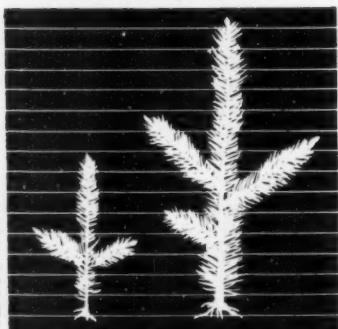
27-D
INDIANA, PA.

NEW! NEW! NEW!

latest results prove...

MORA TREEFEED

means greater growth
BIGGER profits!



In 3 years, control firs grew 36.4 inches . . . TREEFEED-treated firs grew 50.8 inches!

Put MORA TREEFEED's proven effectiveness to work for you! Get 40% greater height . . . 42% greater diameter averages on seedlings treated with TREEFEED fertilizer pellets! Average yearly growth in 3-year period 36% greater for treated seedlings.

Find out how you can get better money crops faster!

—Mail Coupon Today—

Send complete MORA TREEFEED data on controlled tests with Douglas and Noble Firs, Sitka Spruce, Western Hemlock and Ponderosa Pine, to:

NAME
ADDRESS OR BOX NO.
CITY
STATE

Profits GROW with

MORA TREEFEED



MORA CHEMICAL

CORPORATION

3412 16th Avenue West
Seattle 99, Washington

This might have been accomplished in time by independent agencies, but it is doubtful that they could present a wholly united front to the Civil Service and legislative bodies which must act on such matters.

Such strength in unity is a strong argument for consolidation, notably in securing funds from general revenues for operations and in withstanding local and special interest pressures and political interference. Although this puts an agency in a more secure and comfortable position, it shields it from those most directly concerned with its performance. This, it may be argued, is not necessarily good government.

These are but some of the many pros and cons on the merits of resource agency consolidation. The real test, of course, is whether it works. The answer depends upon what you are looking for.

Listed in the *Conservation Yearbook*, I have found that 25 of the 48 states listed have some form of consolidated department. In no state were all of the resource agencies in one department and in some, new independent agencies are under consideration. It is of interest to note that 15 of the consolidated departments are in the 20 most populous states in the country. Conversely, most of the independent agencies are in the states with lower populations, with some notable exceptions. Pennsylvania, for example, has separate divisions of fish and game in addition to the usual complement of agencies for other resources.

The resource agencies usually combined are those concerned with parks, forestry, and wildlife. Those most often existing as separate divisions are concerned with minerals, lands, and waters. Historical factors are probably accountable to some degree for this separation, although the overriding cause appears to be one of protecting special interest.

This, I know, is the case in our own state, where a Division of Reclamation remains safely shielded from conservation interests in the Department of Agriculture and where legislation is currently under consideration to establish an independent water resource policy-making commission. This agency is to be within the Department of Natural Resources which already has a Division of Water and is itself governed by an advisory commission.

Consolidated resource agencies appear to be well-established in most of the states which have had them for 10 or more years. There have, however, been some defections. In Arkansas, an effort to bring together divisions of geology, forestry, parks and recreation, flood control, drainage, soil conservation, industrial development, and state planning into a single department about 10 years ago has collapsed. Recently, it was succeeded by the establishment of six independent commissions. In North Carolina and California, the wildlife divisions were separated from the Conservation Department and made independent agencies with their own commissions. There probably have been other defections which have been overlooked, but over-all, the record is good.

Although no consistent pattern of resource department consolidation appears to exist among the states, there are similarities which may be helpful in appraising the merits of this kind of organization for states considering it. Among these are:

(1) *Size*—Nearly all of the states with consolidated departments have populations in excess of two million persons.

(2) *Composition*—While no state has all the resource agencies under a single department, agencies most frequently combined are operating agencies concerned with forests, parks, and wildlife. Water, soil and some aspects of mineral resources are included in some departments. Agencies most frequently omitted are independent study, research, and planning commissions.

(3) *Administration*—Most of the consolidated departments are administered under a commission which has certain program and policy-making authority and a director responsible to the commission.

(4) *Budgets*—Most of the departments have larger operating budgets than the combined financial resources of their counterparts in independent agencies.

(5) *Services*—Most of the combined departments appear to pro-

USE FOR
LEVELING

CHECKING
ROAD GRADES

MEASURING
TREE HEIGHTS

TOPOGRAPHIC
MAPPING

DOES 4 JOBS BETTER



LEUPOLD
Engineered
ABNEY LEVEL

4 standard scales held in milled slide ready for immediate use without removing and reversing arc frame. Micrometer control of index arm for more accurate readings. Bubble magnifier adjusts internally—no eyepiece to retract for carrying. Complete with 4 common scales. \$36

Degrees • Per Cent
Topographic
Chainage Corrections

With saddle leather
case and Abney Level
Handbook.

LEUPOLD HAND LEVEL. Lightweight and compact. Draw-focus eyepiece. Leather case. \$13.95
At Dealers or Send Check or M.O. (No C.O.D.s)

LEUPOLD
ABNEY LEVEL
HANDBOOK
Illustrates and
describes how
to make full
use of Abney
Level. 25c



LEUPOLD & STEVENS INSTRUMENTS, INC.
4445 N. E. GLISAN STREET • PORTLAND 13, OREGON

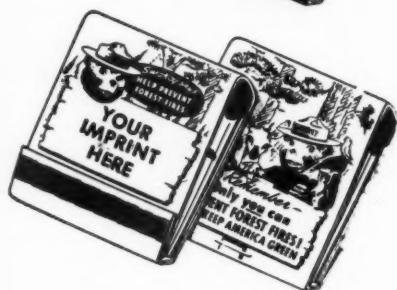
97,910 FOREST FIRES LAST YEAR!

268 FIRES A DAY—1 EVERY 5½ MINUTES!

Most forest fires nationwide are still caused by incendiaries, debris burners, and careless smokers, in that order. You can assist in making the public aware of the need for being careful by using these colorful fire prevention book matches imprinted with your individual name or that of your company.



This striking red, yellow and black design vividly depicts the result of carelessness. Each time one of these matches is used the user is reminded to be careful—and he is reminded too of you, your company and your product, because your message appears on each matchbook.



The Smokey Bear design is attractively finished in true-to-life colors. And regardless of your business—whether you are a butcher, a baker or a candlestick maker—your imprint on each book builds lasting goodwill. The modest cost makes their use a sound advertising value.



The green and white Keep Green design offers in addition to your own imprint, the extra benefit of the Keep Green slogan on the back with the name of your state. There is no extra charge for the additional imprint which is available only on this design.

Check these Facts:

PRICE LIST

There are 2,500 matchbooks in each case—50 cartons of 50 books each. All prices are for the same design, same imprint to one address. Transportation prepaid on orders for four or more cases. Allow thirty days for delivery.

1 case	\$ 25.00
2 cases	45.00
4 cases	80.00
10 cases	175.00

THE AMERICAN FORESTRY ASSOCIATION

919 17th Street N.W., Washington 6, D. C.

Please enter our order for _____ cases of Fire Prevention Bookmatches.
Red & Yellow _____ Smokey _____ Keep Green _____

IMPRINT SHOULD READ

(Please Print)

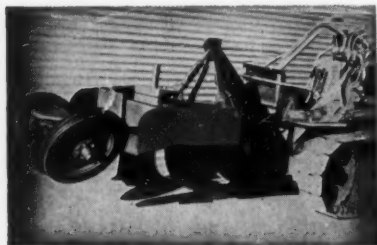
Imprint for back of Keep Green Design only should read:

KEEP _____ Green
Ship to: ☐ Bill Us ☐ Check Enclosed

Name _____

Street _____ Zone _____

City _____ State _____



SCM MODEL TREE PLANTER

Available for D2, T6, TD6, 40C 420C.

Our five distinctly different models are designed for deep penetration and high survival in all soil conditions and terrain.

No distorted roots when Lowther machines are used.

For Details write:

HARRY A. LOWTHER COMPANY

1671 Dearborn Street
AURORA, ILLINOIS

Sterling 3-0693

Adams 2-7242

ALBERT G. HALL
FORESTRY RELATIONS COUNSEL
CONSULTING FORESTER

810 16TH ST., N.W. WASHINGTON 6, D. C.

PRENTISS & CARLISLE CO., INC.

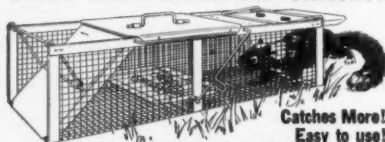
Complete Timber Services

Estimates—Appraisals—Management

107 Court Street Bangor, Maine

When Writing Advertisers—
Please Mention
AMERICAN FORESTS Magazine

CATCH THEM ALIVE AND UNHURT!



Catches More!
Easy to use!

Amazing HAVAHART trap captures raiding rats, rabbits, squirrels, skunks, weasels, etc. Takes mink, coons without injury. Straying pets, poultry released unharmed. Open ends give animal confidence. Fully guaranteed. No jaws or springs to break. Rustproof. Sizes for all needs. Send for booklet on trapping secrets illustrated by Carl Burger. HAVAHART, 155-P Water Street, Ossining, N.Y.

Please send me FREE new 40-page booklet and price list.
Name _____
Address _____

vide more informational and special services than independent agencies.

Each state must obviously determine for itself that form of organization which will best fit its needs. Whether this is through a unified department or a complex set of independent agencies is, I believe, of less importance than providing safeguards which assure that responsibility is vested in competent persons trained for the particular duties they are to perform and that they are vested with the necessary authority and given the material and financial support necessary. If this is to be done through a unified department, I would urge that the framework within which it is built provide as a minimum:

(1) For inclusion only of those agencies whose programs will be complemented by consolidation and will be benefited by the administrative services thus provided.

(2) For final policy, budgetary and program approval to rest with an independent commission made up of informed persons who can represent the different interests involved without bias.

(3) That the commission be vested with adequate authority to carry out its responsibilities.

(4) That adequate financing for the over-all administration of the department and for each of its separate divisions be provided for and sharing of costs for unified services be proportional to benefits rather than based on the ability to pay.

(5) That consistent personnel policies be adopted including safeguards for continuity of services of qualified persons on an equitable basis throughout the department.

(6) That maximum autonomy be encouraged between separate divisions consistent with co-ordination for efficiency, improved services, and programs, but that latitude for free and easy exchange of ideas and services including personnel and facilities between divisions be an integral part of the organization.

(7) That the co-ordination be provided for at the division head level.

(8) That the position of no one division be exploited to enhance that of another.

This is not a guaranteed formula for success. It represents only the views one person has gained from experience and borrowed from others. Since my stint as a resource agency administrator is behind instead of before me, they are expressed without restraint.

TREES FOR SALE

American Arborvitae, Balsam Fir, Engelmann Blue Spruce, White Pine, Scotch Pine, Norway Spruce, White Spruce, etc. Prices reasonable and trees are GUARANTEED TO LIVE. Write for FREE Illustrated Folder. WESTERN MAINE FOREST NURSERY COMPANY Dept. F Fryburg, Maine

CHRISTMAS TREES

Turn wasteland into profit. Our famous Christmas Tree Growers' Guide tells you how. Write for free copy.

OR FOREST TREES
FREE Catalog

MUSSER FORESTS. Box 27-D Indiana, Pa.

SEEDLINGS AND TRANSPLANTS

Pines, Spruces, Firs, Hemlocks, etc.

Write for new price list.

PINE GROVE NURSERY

R. D. No. 3. Clearfield, Pa.

EVERGREEN

SEEDLINGS AND TRANSPLANTS

Growers of Pine, Spruce, Fir, Hemlock, etc. Seedlings and Transplants.

FREE WHOLESALE PRICE LIST
SUNCREST NURSERIES

Box 305-E Homer City, Penna.

TREES FOR FOREST PLANTING PINE+SPRUCE

Firs, Arborvitae and Other Conifers. We raise all our trees in our own nurseries.

KEENE FORESTRY ASSOCIATION
KEENE, NEW HAMPSHIRE

SEEDS TREE..SHRUB

E. C. MORAN
Stanford, Montana

VANS HAS THEM!



The evergreen seedlings and transplants you want are at Vans. Top quality, wide variety, competitive prices. Free catalog.

Address A. F. Van

VANS PINES West Olive, Michigan

SAWDUST MAKES FERTILIZER

GOOD
You can apply 15 tons of sawdust per acre to build rich top-soil rapidly, and greatly increase nitrogen level, if you use the Activo process. Cheaper, more permanent, and better soil condition than with chemical fertilizer. No compost-heap making. Apply now; anytime. Rush postcard for free bulletin, "How to Turn Waste into Gold."

THE ACTIVO PROCESS, Bridgeton 38, Ind.

Multiple Use Gets Confidence Vote

(From page 31)

Since various groups were reporting that lumber was both "opposed" or "for" the principles of multiple use and sustained yield depending on the source, *American Forests* called on NLMA spokesmen to ask: 1) if they were opposed to multiple use and sustained yield, and 2) if they favored or opposed H.R. 10465.

Spokesmen said they were definitely in favor of multiple use and pointed to a substitute bill they had proposed. While lumber did not use the words "multiple use," the fact that they listed the multiple uses—namely water, timber, range, minerals, recreation, wildlife, fish and other purposes, should make it clear that those multiple uses are favored, they said.

However, lumber said that in view of the proposed Forest Service bill and Chief McArdle's subsequent testimony, they did have qualifications as to whether the intent of the bill, as presently worded, wouldn't tend to upend the meaning of the organic act. This act, they reminded the magazine, was largely inspired by The American Forestry Association.

Stressing that lumber's position is still tentative on the bill pending meetings of key policy groups, these spokesmen said they were concerned by the haste with which the bill was being rushed through, believed it should have much more study, and said it was now raising a number of questions. These are: 1) Would the bill modify or repeal the organic act? 2) Since timber is a crop, if all other uses are to be considered on a par with timber, should the national forests be retained in the Dept. of Agriculture? 3) Under the new concept, will the commercial uses be diminished with adverse effects on employment, industries, communities, and revenues? 4) What effect will legislation have on future Forest Service policies relating to acquisition of lands for the national forests? 5) Will the Departments of Commerce and Interior be given ample opportunity to review the proposed legislation?

While one lumber spokesman said, "Actually we're not too far apart on this bill," both stressed that the bill, as a major piece of legislation, should not be pushed through too precipitously without careful study and exchange of views. "Why the great rush?" they asked. "Are there additional underlying reasons for pushing the bill at this particular time that we don't know about?"

WARN HUBS

on your 4-wheel drive
stop front end drag
in 2-wheel drive!

Models for
all makes
of 4 w. ds.
to 1½ tons
at dealers.
Write for
literature.

KEY EQUIPMENT ON SERVICE TRUCKS!

Four-wheel drives, Warn Hubs and forest industries go together like wire rope and sheaves. Off the road, a 4-wheel drive goes practically anywhere, to keep equipment serviced, haul personnel, run patrols. On the highway, free-wheeling 2-wheel drive with Warn Hubs stops front end drag, saves gas, gears, tires, improves steering, performance. Choose Warn Lock-O-Matics or fingertip control Locking Hubs to fit your needs. Guaranteed. Ask your dealer.

PROVEN IN OVER A
BILLION MILES
OF USE UNDER
ALL CONDITIONS!

WARN MFG. CO.
Riverton Box 6064-FR
Seattle 88, Wash.



AMERICAN FORESTS BINDERS

We are pleased to offer these distinctive binders which will hold one volume of **AMERICAN FORESTS**. They are finished in durable green simulated leather with gold stamping and have a label holder to indicate the year. The price is \$3.00 each postpaid with a 10% discount on orders for three or more.

To: The American Forestry Association
919 17th Street, N.W., Washington 6, D. C.

Please send me **AMERICAN FORESTS** Binders for which I enclose \$

Name

Street

City Zone State

4-60

Feature Photo of the Month

Photos used on this page will be of unusual rather than esthetic qualities and subject matter will be restricted to scenes, events, objects or persons related to the use, enjoyment or unique aspects of our renewable natural resources. For each picture selected, AMERICAN FORESTS will pay \$10



Photo submitted by Lola Graham, Santa Cruz, California

The photograph shows a bristlecone pine in the White Mountains of California, where some 27,000 acres were set aside last year as a national forest to protect the pines, the oldest living things in the world. Many of these bristlecones growing about 10,000 feet above sea level, are estimated to be 4000 years old.

Who
means
saw m
and p
and y
Hef
chain
easier
Sta
pull t
Ma

When there's work to be done...

HOMELITE

WIZ

CHAIN SAW

CUT PULP?

See the WIZ with
big 16" plunge
cut bow.



When there's *work* to be done, quality means money. And the Homelite WIZ chain saw means quality . . . and dependability . . . and power . . . and more profit for you. Try it and you'll see why.

Heft its light weight 20 pounds (less bar and chain). It's perfectly balanced so that it's easier to carry, easier to use.

Start it up. No fussing, no tinkering; just pull the cord and away she goes.

Make a few cuts — in *any* position, even

upside down — and notice that it doesn't sputter or choke. You get full power *all* of the time.

Time the speed of its cut as it whizzes through an 18-inch tree in just 16 seconds.

Feel the lugging power of its famous Homelite engine — it's the kind of power that will fell trees up to five feet in diameter and go on doing it day after day.

Try the big 16" plunge cut bow — it won't bind in any cut. Lets you stand up to buck sticks, no more bending and stooping. Saves

effort and gives you top pulpwood production.

Talk to the man who's been using one; he knows that the WIZ stays where you want it — out of the shop and on the job. And even if you do need service, Homelite has a nationwide network of dealer-servicemen who will give you service *when* you need it and *where* you need it.

Find out for yourself. Let your nearby Homelite dealer give you a free demonstration. His name is in the Yellow Pages of your telephone directory.

As little as \$4.30 weekly after small down payment

Think first of quality, think first of Homelite

HOMELITE

A DIVISION OF TEXTRON, INC.

4204 RIVERDALE AVE., PORT CHESTER, NEW YORK
In Canada — Terry Machinery Co., Ltd.

- gear drive
- 20 pounds, less bar and chain
- 16" plunge-cut bow
- straight blades — 14" to 28"
- clearing bar



OREGON[®] MICRO-BIT Chipper Chain

**30%-40%
MORE CHAIN LIFE
MORE PRODUCTION**

— that's what users are getting, thanks to the \$200,000, 23 months Micro-Bit Chain development program!

Users everywhere are cashing in on OREGON'S big investment in money and time to produce a new cutting chain of outstanding superiority.

The resulting Micro-Manufacture process features and design features account for the performance record which OREGON Micro-Bit is turning in . . . features which give you not only longer chain life and greater production, but faster, smoother cutting, easier filing, more over-all economy and freedom from breakdown.

Currently available: 31C—.058 drive link; 32C—.063 drive link. Install it . . . you'll like it . . . on your saw.



"For The Best Cutting
You Ever Had"

OREGON[®]
MICRO-BIT
Chipper Chain

Your OREGON-IZED[®] Sales Outlet Has It

© Copyright 1960 by
OMARK Industries, Inc.—OREGON Saw Chain Division
Portland 22, Oregon



SIX NEW MICRO-MANUFACTURE PROCESS FEATURES - SIX NEW DESIGN FEATURES GIVE YOU 30%-40% MORE CHAIN LIFE, MORE PRODUCTION

- 1** UNIFORM CLOSE TOLERANCES for prolonged wear-resistant service.
- 2** NEW CONTROLLED UNIFORM CHROMING decreases cutter wear, reduces filing.
- 3** NEW OTRONIC CUTTER HEAT TREATING for greater edge-holding quality.
- 1** CUTTER TOP PLATE 11% longer for increased chain life.
- 2** CUTTERS CHIP-CHANNELED for faster, smoother action.
- 3** TIE-STRAPS ARCH-BACKED to strengthen chain throughout.
- 4** NEW MICRO-ROUND RIVET HOLES greatly reduce chain stretch.
- 5** NEW MICRO-SHEEN PROCESSING decreases drive-link metal fatigue.
- 4** TOUGH NEW STEELS for prolonged fast, smooth cutting.
- 5** 37% MORE METAL AROUND DRIVE LINK rivet holes for added strength.
- 6** TRIPLE-TRONIC HEAT TREATING strengthens rivets, prolongs chain life.
- 6** TIE STRAP BEARING SURFACE 12.5% longer for added stability.



